CONSTRUCTION NEWS

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RAILWAYS.

*(*Denotes that this work is advertised in Engineering News.)*

NEW YORK.—Central New England R. R. Co.—The Pub. Service Comn. has granted the petition of this company for the elimination of the grade crossing at Little Britain Road.

WEST VIRGINIA.—The Fairmont & Clarksburg R. R. Co. has recently been incorporated. The proposed line will be from Clarksburg to Fairmont by way of Grafton, about 30 miles. The incorporators are: G. F. Humphreys, A. B. Corder, Bridgeport, W. Va.; Arthur Stealey, Austin C. Merrill, H. P. Keenan, Fairmont, W. Va.; Charles F. Sutherland, Morgantown, W. Va.; C. Lee Reynolds, Flemington, W. Va.; J. M. Roberts, Morris W. Mead, John G. Leasure, Charles C. Benton, Pittsburg, Pa., and William Straub, New Kensington, Pa.

GEORGIA.—Atlanta, Waycross & Northern R. R.—Press advices state that the stockholders have voted an issue of bonds in the sum of $4,800,000 and stock to the amount of $1,500,000 to build and equip the railroad, projected from St. Marys, a small port on the Atlantic Ocean, through Waycross, Nichols, Broxton and Abbeville, to either Perry or Fort Valley, thence to Atlanta. The total distance is about 200 miles. The estimated cost of the line, exclusive of the mileage already constructed, is $5,000,000. Waycross has been made headquarters of the new line, and offices are already opened.

ALABAMA.—Birmingham, Demopolis & Pascagoula R. R.—Press reports state that the portion of the road between Demopolis and Linden, 18 miles, will be built this year. A. R. Smith, Demopolis, Ala., is interested.

TENNESSEE.—New Orleans, Chicago & Orleans R. R. Co.—Official advices state that surveys for the proposed line from Mobile to Middleton are not complete. B. V. Wright, Laurel, Miss., is Engr. M. of W. and L. W. Duffee, New Albany, Miss., Locating Engr. Noted April 6.

KENTUCKY.—Chicago, Memphis & Gulf R. R.—This railroad will be extended from Hickman, Ky., through Fulton, Hickman, Carlisle, Ballard and McCracken Counties, to Paducah, Ky., according to amended articles of incorporation filed with the State Railroad Commission. The new railroad will open that section of Kentucky along the Mississippi River. It will be a connecting link between Chicago, St. Louis and Memphis, and will develop an entirely new territory. Engineers are now engaged in locating the route, and until their work is finished information as to the exact course to be taken will be lacking. S. G. Latta, Dyersburg, Tenn., is Pres. and Gen. Mgr.

IOWA.—Chicago, Rock Island & Pacific Ry.—The St. Paul & Kansas City Short Line, which is to be built by the Rock Island to connect the recently acquired St. Paul & Des Moines with the Missouri division, and establish a short line from the Twin Cities to Kansas City. The latter road extends northeast from Des Moines to Mason City. At Iowa Falls connection can be made with the Rock Island for Minneapolis and St. Paul, giving the latter a direct line north from Des Moines. To complete the line to Kansas City it will only be necessary to build south from Des Moines to a connection with the Missouri division, and this is to be done by a line from Carlisle to Allerton, Iowa. Carlisle is only 10 miles south of Des Moines on the Winterset branch, and Allerton is on the Missouri division. The new construction will be costly, as the line will be through rough country. The maximum grades will be [illegible], and maximum curves will be 3°. The estimated cost is $60,000 per mile. J. B. Berry, Chicago, Ill., is Ch. Engr. Noted March 2.

TEXAS.—Missouri, Kansas & Texas Ry.—The construction of a line from the western terminus of the Texas Central to Roswell, N. Mex., is under consideration. This would mean about 300 miles of building, and would cost something like $6,000,000. The country between Rotan, on the western end of the Texas Central, and Roswell is level. The extension of the De Leon-Crossplains branch of the Texas Central to Nolan, Texas, about 100 miles north, is also talked of. Another probable undertaking, and one of the most important ones, is the building of a line from Waco to Trinity, and from Trinity to Beaumont. The first would make the Trinity-to Colmesneil "Orphan" line a part of the system proper. The line is now isolated from it. A. M. Acheson, Dallas, Tex., is Acting Ch. Engr.

✚WASHINGTON.—Chicago, Milwaukee & Puget Sound.—The first of a series of contracts to eliminate grade crossings in Spokane was let recently. This is for a 650-ft. subway in Fourth Ave., between Sheridan St. and the Spokane River. The contract involving $600,000 was let to BATES & RODGERS, Spokane. The entire work will cost about $2,500,000.

ONTARIO.—Canadian Pacific Ry.—The Engineers have been instructed to begin at once on the location of the new line from Glentay, 16 miles west of Smith's Falls, to Toronto, and it is expected the road will be in operation in two years. The line will run from Glentay southwest to Belleville, thence along the lake shore Leaside Junction near North Toronto, about 170 miles. David McNicoll, Vice-Pres. and Gen. Mgr., in making this announcement also stated that the line from Hamilton to Guelph Junction, about 28 miles, has been located and plans filed with the Ry. Commission.

ONTARIO.—The Ontario & Quebec Ry. has been incorporated. It will begin at a point on the National Transcontinental Ry. and traverse the Abitibi and Porcupine district.

✚HAITI.—National Rys. of Haiti.—A contract has been made with the CARIBBEAN CONSTRUCTION CO., 60 Wall St., New York, N. Y., for the construction of 350 miles of railway. The gage will be 4 ft., the rails 55 lbs. and rails, bridges and all steel track materials will be bought in the United States. Cars and locomotives may be purchased here. Wm. R. Grace & Co., 1 Hanover Sq., New York, N. Y., are interested and are fiscal agents. C. G. Young, 60 Wall St., New York, N. Y., is Consulting Engr.

ELECTRIC RAILWAYS.

(✚Denotes a contract awarded.)

STAFFORD SPRINGS, CONN.—The Willimantic & Stafford St. Ry. Co. recently incorporated will build a line from Stafford Springs to Willimantic, by way of South Willington, Springhill and Mansfield Center. The incorporators are L. J. Storrs, Mansfield; G. J. Kirby, Mansfield Center, and others.

ELIZABETH, N. J.—The Elizabeth, New Brunswick & Trenton R. R. Co. is incorporated and proposes to build a line from Newark to Trenton. This is a Public Service proposition and the officers are the same as the Public Service Corporation of Newark.

✚WOODLAWN, PA.—The contract for the construction of a railway from Woodlawn to Aliquippa, with a branch on Franklin Ave. running toward New Sheffield, has been awarded by the Woodlawn and Southern Railway Co., to the J. G. McGUIRE CONTRACTING CO., New Brighton, Pa. The line will be nearly three miles long. J. G. McGUIRE CONTRACTING CO. has also secured the contract from the borough of Woodlawn for grading the main road leading from Woodlawn to Aliquippa. Work on both contracts will be carried on at the same time.

✚TOWSON, MD.—The contract for clearing right-of-way for new railway to be built by the Towson & Cockeysville Electric Ry. Co. has been awarded to J. H. HARLOW CONTRACTING CO. Surveys are nearly complete. Noted April 27.

PETERSBURG, VA.—Plans are contemplated that will ultimately mean the linking up of several important lines in Virginia into a through line between Washington, D. C., and Norfolk, Va., a distance of about 200 miles. Frank Jay Gould, 165 Broadway, New York, has recently acquired the Norfolk & Portsmouth Traction Co., a system having 75 miles of track in and around Norfolk and Portsmouth. He has for some time been chairman of the Board of the Virginia Ry. & Power Co., which has a line from Petersburgh to Richmond. The intervening gap between Portsmouth and Petersburg, 75 miles, will be built by the way of Suffolk.

Mr. Gould is also president of the Richmond & Chesapeake Bay Ry. Co., which connects Richmond and Ashland, 16 miles. From this point a line will be built to Fredericksburg by way of Ashland, about 50 miles.

Extensions from Fredericksburg will be taken up at a later date. The Gould interests have valuable water power interests in Virginia.

BRISTOL, VA.—The Bristol Traction Co., a new organization, has purchased the properties of the Bristol Belt Line Railway Co., including all the electric railway lines now in operation here. Fred. Dulaney, Vice-Pres. and Mgr. states that the company will spend about $100,000 for improvements and extensions, beginning at an early date. The purpose is to give Bristol a thorough car service by extensions and loops, reaching every section of the city. These improvements will include an extension to the King Spring settlement, in South Bristol; an extension to Virginia Park, in the northwestern suburbs; a loop thence, connecting with the State St. Line; a loop in West Bristol, and the electrifying of the Holston Valley Railway, which has been acquired by the company, and which extends to Big Creek Park, on the Holston River, about ten miles.

GREENVILLE, N. C.—The Greenville, Spartanburg & Anderson Ry. Co. has increased its capital $1,000,000 and proposes to extend its interurban railway over the Piedmont section of South Carolina. In addition to the lines mentioned in the original charter, which were to run from Anderson to Spartanburg by Greenville, the company is given the right to run a line from Belton to Greenwood, through Honea Path, Donalds, Hodges and Cokesburg. This company, it is said, is closely identified with the Duke interests and the Piedmont & Northern Ry. J. P. Clark, Greenville is Gen. Mgr.

ATLANTA, GA.—The Atlanta & Northwestern Ry. Co., has been incorporated and will build a line connecting Creighton, Cumming, Alpharetta and Roswell about 45 miles. J. M. Ponder, Forsythe, is Pres. and R. P. Jones, Atlanta, is Secy.

NEW IBERIA, LA.—Mayor J. S. Power has issued a call for a special session of the City Council to receive the application made by the Southwestern Electric Co., for a franchise to construct and operate a trolley line here. It is also contemplated to extend the line from Spanish Lake, west of this city and eastward to the town of Jeanerette.

BENTON HARBOR, MICH.—The Benton Harbor-St. Joe Ry. & Light Co. has received a franchise for a period of 30 years, to extend its tracks in Benton Harbor. The line will then continue to Dowagiac.

OSCEOLA, IOWA.—The Osceola & Southwestern Ry. Co. contemplates building a railway between Osceola, Lasell and Hopeville, about 20 miles. A power house and repair shop will be erected here. John E. Barnard, Jas. H. Jamison, R. M. Lewis and others, all of this city are the directors.

WAYZATA, MINN.—The Electric Short Line R. R. Co., Minneapolis, has been granted a franchise to build its tracks in Wayzata.

SIOUX FALLS, S. DAK.—Articles of incorporation have been filed for the Sioux Falls & Southern Minnesota Traction Co., the offices of which are at Pierre, S. Dak. The incorporators are L. B. Wyckoff, Syracuse, N. Y.; J. J. Davenport, H. W. Knight, Charles S. Sollars, Chicago, Ill.; G. P. Peterson, Pierre, S. Dak. The company proposes the construction of a railway for freight and passenger transportation between Sioux Falls, S. Dak., and Albert Lea, Minn.

BISMARCK, N. DAK.—The Bismarck, Belleview Valley & Western Ry. Co. contemplate building a line from Bismarck to Sunlight. About 20 miles.

KANSAS CITY, MO.—The West Missouri Electric Ry. Co., will build a railway from Kansas City to Harrisonville passing through Grandview and Belton. H. A. Nagle, Kansas City, is Ch. Engr.

BLAINE, WASH.—The Nooksack Valley Traction Co., has been granted a franchise to lay track for a railway here.

CLE ELUM, WASH. — The council has passed an ordinance granting Paul L. Richards, Tacoma, Wash., the right to construct, build and operate a railway system upon certain streets, alleys and public grounds in the city of Cle Elum, for a period of 30 years. Noted April 13.

LOS ANGELES, CAL.—The Pacific Electric Ry. Co., will build an extension from Fourth St. Glendale, to Burbank about five miles. The contract will be let in the near future. J. McMillan, Los Angeles, is Gen. Mgr.

NAPA, CAL.—A contract for building 10 miles of single track line will be let in the near future by the San Francisco, Vallejo & Napa Valley R. R. Co.

REDWOOD CITY, CAL.—The Redwood City Ry. Co., has made application for a charter to build an electric railway from a point half a mile south of the county courthouse northeasterly to a point on San Francisco Bay, about five miles. G. A. Merrill, G. W. Lovie, V. V. Greco and others, all of Redwood, are directors.

✚WELLAND, ONT.—The contract for constructing the street railway system in Welland has been awarded to HENDRICK H. LEACH & CO. by the Niagara Falls, Welland & Lake Erie Ry. Co. C. J. Laughlin, Welland, is Pres.; F. C. Carlson, Los Angeles, is Vice-Pres.; A. P. Laughlin, Welland, is Secy., and D. L. Stafford, Dunkirk, is Treas.

HILO, HAWAII.—We are officially advised that a franchise, for the construction of a street railway, has been granted by Gov. Frear to L. S. Conners and W. H. Johnson of Hilo.

LIGHT AND POWER PLANTS.

*(*Denotes that this work is advertised in Engineering News.)*

✚MARLBOROUGH, MASS. — The Marlborough Gas Co. has awarded a contract to the WALWORTH MANUFACTURING CO. for laying 42,300 ft. of 4-in., 20,500 ft. of 2-in. and 15,000 ft. of ¾-in. gas pipe in Maynard and other adjacent towns.

WILLIMANTIC, CONN.—See item under Manufacturing Plants.

WINDSOR LOCKS, CONN.—The Northern Connecticut Power Co. plans to build a dam on the west side of the Connecticut River, just north of the railroad bridge, near the foot of Terry's Island, and where a 30-ft. fall will be secured. Near the north end of the island another dam will be built on the east end, with a spillway, and would form a large storage basin for water supply. A navigation channel would be built 400 ft. wide from the west bank. A large power house is also planned and the company propose to sell electricity to the adjacent towns at wholesale rates. Noted Jan. 12.

WATERBURY, CONN.—Plans have been completed for a brick power house, 24 × 48 ft., to be built on East Main St. by the Mattatuck Mfg. Co. E. E. Benedict, 51 Leavenworth St., is the Arch.

NEW YORK, N. Y.—Bids will be received by George Cromwell, Pres. Boro. Richmond, Borough Hall, St. George, S. I., N. Y., until noon, May 9, for furnishing railing and pedestal lamp-posts on Jay St. and South St., retaining walls, railing and tablets on Stuyvesant Pl., retaining wall, and curb lamp-posts on Jay St., South St., Hyatt St., Stuyvesant Pl., Central Ave., Arrietta St. and Griffin St., being part of the street improvements authorized for the St. George ferry approach, Contract No. 6.

Bids will be received by George Cromwell, Pres. Boro. Richmond, Borough Hall, St. George, S. I., N. Y., until noon, May 9, for repairs, rewiring, alterations and additions to electric equipment, etc., in the following buildings: Court-house, Richmond; County Clerk's office, Richmond, Village Halls at New Brighton and Stapleton, N. Y. The plans and the contract, including the specifications, in the form approved by the Corporation Counsel, may be seen and other information obtained at the office of the Engineer of the Borough of Richmond, Borough Hall, St. George, S. I.

BROOKLYN, N. Y.—Bids will be received by C. B. J. Snyder, Supt. School Bldgs., New York City, until May 8, for the installation of electrical equipments in School 165, Boro Brooklyn.

PHILADELPHIA, PA.—A bill has been placed before the City Council for the installation of 190 lights of 2,000 candlepower each, arranged in pairs on ornamental standards similar to those in Market, Chestnut and other streets in the center of the city, on either side of the center driveway between Moyamensing Ave. and the Philadelphia Navy Yard, and 420 tungsten lights of about 70 candlepower each on the sides of the service driveways flanking the boulevard. The latter lamps will be installed as single lights on 10-ft. poles, with each light enclosed in a 16-in. glass globe. For the erection of the twin arc light standards and these single poles with installation of the necessary wires and conduits there is appropriated about $75,000, so that when completed the entire equipment will be owned by the city. The work is expected to be finished by about Sept. 21.

The Philadelphia Electric Co. has bought a plot, 87 × 400 ft., on the west side of 13th St., above Jefferson St. and running through to 31st St., for $16,000. An auxiliary power plant and cold storage building will be erected there.

ALTOONA, PA.—A charter has been granted to the Mountain City Light, Heat & Power Co., Altoona, now operating a power plant at Tyrone, and having water rights extending from Huntingdon township, Huntingdon county, west of the boundary of Logan township, Blair county. The new charter gives them water rights in Huntingdon county and Logan township. While nothing definite has been determined, the lines will probably be extended.

✚PITTSBURG, PA.—The Dilworth, Porter & Co., Ltd., will enlarge its mill and will install an electric drive. A contract has been awarded THE GENERAL ELECTRIC CO., Schenectady, for the following: One 1,500 KVA mixed pressure turbine which will run from the Company's present rolling mill engines; one 25 kw. Turbo exciter; one 700 HP. Mill Motor; one 350 HP. Mill Motor; two 20 HP. totally enclosed motors; six 7 HP. Mill Motors; two 75 HP. Vertical Motors; three 40 kw. power transformers; Switchboard, and controlling apparatus.

WYOMISSING, PA.—Preparations are being made by the city for the installation of a municipal light and power plant. Bonds for $60,000 will be issued.

✚JACKSON, TENN.—The contract for generator and arc lamps has been awarded to the GENERAL ELECTRIC CO., of Schenectady, N. Y.; the contract for engine to HOOVER, OWENS, RENTSCHLER CO., Hamilton, Ohio. Estimated cost $14,750. Noted March 30.

✚CINCINNATI, OHIO.—The contract for lighting certain streets has been awarded to the UNION GAS & ELECTRIC CO., Cincinnati. The contract calls for luminous magnetite of metallic flame arclamp in underground district, $55 per lamp per year; overhead district, $50 per lamp per year; boulevard system, $56 per cluster per year; 80-watt tungsten, mazda or other metallic filament incandescent lamp in overhead district, $13 per lamp per year. John J. Wenner is Clk. Pub. Service.

DAYTON, OHIO.—Bids will be received by the Bd. of Trustees of the Dayton Hospital until May 23 for furnishing and erecting complete a 250 KW. D. C. generator direct connected to a slow speed Corliss engine.

CLEVELAND, OHIO.—The Euclid Doan Power Co., of Cleveland, has been incorporated to erect a power-house for the generation of electricity for commercial purposes. S. H. Seibert, Joseph Morgenstern, F. Ethel Whipp, Sidney S. Harvey and A. J. Harvey are the incorporators.

BRAZIL, IND.—The City Council is receiving plans and prices on the apparatus needed in the installation of a new municipal electric light plant.

OAKLAND CITY, IND.—Bids will be asked for in the near future for the construction of an 8-in. pipe line to connect and supply natural gas to Oakland City, Winslow, Petersburg, Francisco and Princeton. A. B. Ayers, W. M. Frazee and J. H. Henley are promoters.

MENASHA, WIS.—The Board of Water commissioners has recommended the installation of two 225 HP. Deisel engines and the con-

struction of an addition to the power house at the municipal water works station. The estimated cost is $30,000.

BONAPARTE, IOWA.—A franchise for the establishment and maintenance of an electric lighting plant for a period of 20 years has been voted. Power will be furnished by the United Woolen Mills.

PIERRE, S. DAK.—See item under Streets and Roads.

HELENA, MONT.—Bids will be received by the Clk. State Bd. of Examiners, Helena, until June 17 for lighting and fixtures to be installed in the State Capitol Bldg., Helena.

COLUMBUS, MO.—Bids will be received until May 16 by John S. Bicknell, City Clk., for an electric light and power plant. H. H. Humphrey, 1312 Chemical Bldg., St. Louis, is Engr.

FORT STOCKTON, TEX.—See item under Manufacturing Plants.

PORTLAND, TEX.—Charles, P. Taft of Cincinnati has approved plans for improvements to cost about $600,000 to be made on his ranch in Portland and adjacent to this place. An electric light and power plant, a water works plant and distributing system and a number of other industrial enterprises will be built. A deepwater harbor will be established on Corpus Christi Bay near the town. Wharves and other port facilities will be constructed and installed. The water for the proposed distributing system will be brought from artesian wells, a distance of eight miles. While the appropriation for improvements this year amounts to $600,000, it is announced that more than $2,000,000 will have been expended before the proposed plans are rounded out. John G. Willacy, Corpus Christi, has charge of the work.

TROUP, TEX.—The local electric light and power plant has been purchased by R. C. Shumate of Zephyr from Clark Finch. Improvements and extensions will be made.

COLEMAN, TEX.—The contract for the construction of an electric light station has been awarded to BRIGGS-WEAVER MACHINERY CO., Dallas. The building will be built of concrete.

KINGSLAND, TEX.—C. H. Alexander, of Dallas, who is connected with the Colorado River Power Co., that is building a dam and hydroelectric plant at Marble Falls, Tex., is arranging to establish a similar enterprise on the Colorado River near here. He has selected the site for the proposed dam and acquired the land in the valley that is to be overflowed by the water storage reservoir. The capacity will be about 10,000-HP., it is stated. It will be operated in connection with the plant at Marble Falls. The proposed dam will be of the same open-chamber type as the one at Marble Falls. Electric power transmission lines will be constructed from these two hydroelectric plants to towns and cities within a radius of 150 miles, tentative contracts for the sale of the power having already been entered into with a number of industrial concerns. Within this radius are located San Antonio, Austin, Waco, Temple, Belton, Llano, Burnet, Lampasas, Taylor, Georgetown, San Marcos, New Braunfels and many other towns of smaller size.

PHOENIX, ARIZ.—See item under Water Supply-Irrigation.

SEATTLE, WASH.—The bill has been passed authorizing an expenditure of $75,000 for the construction of a new power plant to be used in connection with the city power plant on Cedar River. The plant will be located on Lake Union at the foot of Nelson Place, will furnish 2,000 HP. daily. Plans and specifications will probably be prepared at once and will call for the laying of a steel main from the Volunteer Park reservoir to the new plant.

SEATTLE, WASH.—The County Commissioners propose to make additions to the heating, lighting and power plant at the Kings County Hospital. J. H. Hull has been retained to prepare plans and specifications.

WHITE SALMON, WASH.—The Pacific Power & Light Co., Portland, will extend its electric service system from White Salmon to Kennewick and Walla Walla and ultimately to Priest Rapids.

WINONA, WASH.—M. W. Peckler, Winona, has purchased a site one mile west of Winona, where a power plant will be built to supply Endicott, La Crosse and Winona with light and power. It is proposed to dam the Palouse River.

CHEHALIS, WASH.—A franchise has been granted to the Twin City Light & Traction Co. A lease to operate the electric lighting system in Chehalis for 50 years. The company contemplates building a power-house. Estimated cost, $75,000. Frank Crown, Chehalis, is Ch. Engr.

BAKER CITY, ORE.—City officials are considering the construction of a hydroelectric lighting plant estimated to cost $25,000. J. W. Bailey is City Engr.

ALAMEDA, CAL.—An appropriation of $5,000 will be made by the City Council for the installation of a power line to supply current for operating motors on three drawbridges across the tidal canal.

ANAHEIM, CAL.—Bids will be received until May 11 by E. B. Merritt, City Clk., for furnishing one compound automatic steam engine, one 150-KW. A. 2,200 volts, 3-phase, 60-cycle, alternating generator, one exciter, one generator switchboard panel, building foundation and erecting engine and generator. A. L. Lewis, Anaheim, is Supt. of the Municipal Light and Water-Works.

CLAREMONT, CAL.—The City Council has passed an ordinance granting the Pacific Light & Power Corporation a franchise for a period of 50 years to erect poles and string wires for electrical purposes along Mills Ave., from North First St. to the Northern city limits. F. H. Cooper is City Clk.

✚LOS ANGELES, CAL.—The contract for constructing an oil gas generating set at the plant owned by the Los Angeles Gas & Electric Corporation on Aliso St., has been awarded to the BAKER IRON WORKS, 932 Buena Vista St.

The Eagle Rock Water Co. has been granted the right to construct and maintain an electric system on Central Ave., from Sycamore Ave. to Lawren St., and on Sycamore Ave., from Central Ave. to Linden St., and on Eagle Rock Ave., and other streets. H. J. Lelande is County Clk.

The Pacific Light & Power Co. has applied for a franchise for right-of-way to lay gas mains on streets not covered by its present franchise. D. Brian, 624 Pacific Electric Bldg., Los Angeles, is Ch. Engr.

MERCED, CAL.—The Merced River Land Co., Los Angeles, has purchased 2,600 acres of land one mile west of Snelling and will, in the near future, install an electric pumping plant. W. O. Huse is Mgr.

OAKLAND, CAL.—The Oakland Gas, Light & Heat Co. is preparing plans for extensive improvements, including the installation of 20,000-HP. or 15,000-K.W.A. electric turbo-generators which will require the use of 10,000 extra boiler power. The turbo-generator will cost approximately $500,000 when installed and about $100,000 will be spent for the extension of the gas distributing system, and $500,000 for the extension of the electric system. Cables and light wires underground in the "fifth" underground district, comprising the central district of the city will be placed. Frank A. Leach, Jr., is Pres.

PATTON, CAL.—Nathaniel Ellery, State Engr., Sacramento, has plans in preparation for a gas and electric plant to be installed at the State Hospital near this city. The sum of $55,000 is available for this work.

SOUTH PASADENA, CAL.—Bids will be received until May 8 by William Cox, City Clk., for the installation of conduits, wires, posts and lamps for lighting certain streets.

GLENDALE, CAL.—E. L. Goode, former owner of the Glendale Eagle Rock Ry., is planning a scheme to build several street railways for this section, the largest project being a line from the Yellow Eagle Rock line to Glendale thence along Seventh St., Everett St., and Fourth St. to Glendale Ave., finally making a connection with the Glendale-Eagle Rock line.

LOS ANGELES, CAL.—The following bids were opened by the Bd. of Supervisors of Los Angeles County for furnishing two engine generator sets for the Hall of Records: Machinery & Electric Co., five bids, $11,028 to $14,582; J. F. Connell, five bids, $11,395 to $16,320; Brann, Williams & Russell, $13,500; Pacific Coast Mfg. Co., $14,160.

RENFREW, ONT.—It is proposed to expend about $117,000 in the purchase of sites and the construction of the municipal power plant. The work will probably be done by day labor. W. E. Smallfield is Chmn. Water Works Comn. J. R. Stewart, of Renfrew, is Engr.

SANDWICH, ONT.—A franchise has been granted to Robert Stuart to build a transmission line through the city streets from his proposed power plant.

TORONTO, ONT.—Bids will be received until May 9, by G. R. Geary, Chn. Bd. of Control, for glass cylinders and aluminum reflectors. Specifications may be seen at Toronto Hydroelectric Dept., City Hall.

WINNIPEG, MAN.—Bids will be received by M. Peterson, Secy. Bd. of Control, until May 15, for the manufacture, delivery and installation of six 500 KW. stepdown transformers for substation No. 1. Specifications may be obtained from Smith, Kerry & Chace, Power Engineers, Carnegie Library Bldg.

✚SASKATOON, SASK.—The contracts for generating plant equipments opened March 27 were awarded as follows: BABCOCK & WILCOX, LTD., for three 500-HP. water-tube boilers and three chain grate stokers; ROBB-ARMSTRONG ENGINEERING CO., one vertical cross-compound engine, 1,250-HP. and one exciter engine; CANADIAN GENERAL ELECTRIC CO., one 750-KW. generator with exciter, two switchboards, etc.; CANADA FOUNDRY CO., one Cochrane heater and oil separator. Noted March 16.

EDMONTON, ALTA.—Bids will be received by John Stocks, Dept. Minister Pub. Wks., until May 15, for the plumbing, heating and ventilation required in connection with the Parliament buildings. Plans may be seen at the office of the Engr., Edmonton, at the office of William Fingland, Arch., Portage Ave., Winnipeg.

✚NULATO, ALASKA.—The contract has been awarded by the Navy Dept. for erecting the building to house the wireless station here at $16,794 to CHRIST KUPLER, 211 8th Ave.

BRIDGES.

(✚Denotes a contract awarded.)

BARNSTABLE, MASS.—We are officially advised that the time for opening bids for the construction of a reinforced-concrete bridge over West Bay has been extended to May 13. The bridge will be 289 ft. long and 20 ft. wide and will have a steel draw span. F. C. Wales, 8 Beacon St., Boston, Mass., is Engr. Noted on April 28.

BOSTON, MASS.—Bids will be received by Louis K. Rourke, Comr. Pub. Wks., until May 11, for repairing the Dartmouth St. bridge.

ALBANY, N. Y.—Plans and specifications for the reconstruction of a portion of the bridge spanning the Hudson River at Schuylerville, as embraced in Barge Canal Contract No. 88, have been approved by the Canal Board. The work will cost about $23,500 and bids will be asked soon. C. E. Treman is Supt. Pub. Wks.

MASSENA, N. Y.—The bridge over the Raquette River on the Depot Road has been condemned by the State Highway Department and estimates for a concrete structure are being prepared. It is thought the cost will approximate $30,000.

NIAGARA FALLS, N. Y.—The Grade Crossing Commission have received bids for building the approaches to the Eleventh St. bridge, estimated cost, $38,000, as follows: Braas Bros., $35,987; Read-Coddington Engineering Co., $36,950; Eastern Concrete Steel Co., Buffalo, N. Y., $30,155; John E. Johnson Co., Buffalo, $25,990. The bids were referred to John L. Harper, Engr. Noted on April 14.

RICHMONDVILLE, N. Y.—Bids will be received until 1 p. m., May 12, for the construction of a bridge. Bids will be received on iron, concrete arch, stone, masonry and arch. G. C. Shafer is Town Clk.

WATERTOWN, N. Y.—The New York Central R. R. has announced its intention to construct a bridge at Sewalls Islands, over the north branch of the river, at a probable cost of $30,000. Earl W. Sayles is City Engr. of Watertown, and G. W. Kittredge, New York, is Ch. Engr. of Construction.

BETHLEHEM, PA.—Press reports state that a bridge to cost from $250,000 to $500,000, will be constructed over the Lehigh River between Bethlehem and South Bethlehem, to replace the covered wooden structure, which has been condemned.

HOLLIDAYSBURG, PA.—Bids will be received by the Commissioners of Blair County until noon, May 5, for repairing five bridges. W. S. Hostler is Clk. Comrs.

MEADVILLE, PA.—Plans are being prepared by W. T. Dutton, County Engr., for a steel or concrete bridge with two spans, 200 and 60 ft. long, respectively, over French Creek at Mead Ave. The bridge is estimated at from $30,000 to $35,000.

PHILADELPHIA, PA.—Bids will be received until May 9 for the following work: Widening the Chestnut St. bridge over the Schuylkill River, estimated at $90,000; for building a bridge on the line of Springfield Ave., under the Philadelphia & Baltimore Central R. R., estimated at $40,000; for constructing additional piling fenders for the Passyunk Ave. bridge, estimated at $8,000. George R. Stearns is Dir. Pub. Wks.

PHILADELPHIA, PA.—See item under Miscellaneous Contracts: Elimination of Grade Crossings, Philadelphia, Pa.

WEST CHESTER, PA.—Bids will be received by the Commissioners of Chester County until noon, May 15, for constructing a reinforced-concrete bridge at Springdale Station, over Doe Creek. E. V. Philips is Clk. Comrs.

RICHMOND, VA.—Bids will be received by P. St. J. Wilson, State Highway Comr., until noon, May 8, for constructing a concrete bridge over Pole Cat Creek on Caroline County, one-eighth mile from Penola. The bridge will be 118 ft. long with six 16-ft. clear slab spans. Plans and specifications may be obtained from the Childrey, Sunday Co., Richmond.

HENDERSON, KY.—Bids will be received until May 4 for constructing 14 steel bridges, estimated to cost $16,000. C. E. Sugg is County Clk.

LOUISVILLE, KY.—Bids will be opened on May 8 for constructing a reinforced-concrete bridge, 100 ft. long and 60 ft. wide, at Underhill St. The structure is estimated to cost $15,000. D. R. Lyman is City Engr. and H. C. Nelson, City Cl.

BOWLING GREEN, OHIO.—Bids will be received by the County Commissioners, until 1 p. m., May 11, for constructing a reinforced-concrete bridge to be erected about 50 rods north of the east quarter post of section 25, Freedom Township.

*CINCINNATI, OHIO.—Bids will be received by the Director of Public Service, John J. Wenner, Clk., until noon, May 29, for the driving of piling, the construction of the substructure and miscellaneous work in connection thereof for the Gilbert Ave. Viaduct. The certified check to accompany the bid must be for $10,000, not $1,000, as noted in the advertisement in this issue.

DAYTON, OHIO.—Bids will soon be asked by William A. Budroe, Clk. Dept. Pub. Ser., for constructing the Wolf Creek bridge at the confluence of Miami River and Wolf Creek. The cost of the structure is estimated at $17,000.

LORAIN, OHIO.—Bids will be received by the Board of Commissioners of Lorain County, until 1 p. m., May 22, for bridge work as follows: For furnishing the material and performing all necessary labor for constructing Bassett bridge substructure and superstructure No. 205, in Russia Township; bridge substructure and superstructure No. 196, on Spring St., Oberlin Village; Twining bridge substructure and superstructure No. 222, in Camden Township; Bridge substructure and superstructure No. 231, on Middle Ridge Road, Amherst Township. C. H. Lawrence is County Surv. and Charles Chandler, Clk. Comrs.

SIDNEY, OHIO.—Bids will be received by the Commissioners of Shelby County until 10 a. m., May 13, for furnishing all labor and material necessary for the construction of superstructure for one steel highway bridge, length of span, 75 ft., over Mosquito Creek, Green Township, near Palestine. Plans and specifications for same will be on file and open for inspection at the office of H. T. Ruese, County Audr.

DELAWARE, OHIO.—Bids will be received by W. H. Bodbetha, County Audr., of Delaware County, until noon, May 15, for the labor and material necessary to build the east abutment of the Sunbury Pike bridge over Alum Creek in Berlin Township.

LIBERTYVILLE, ILL.—Bids will be received by E. D. Hubbard, Town Clerk, until 1 p. m., May 9, for the construction of a reinforced-concrete bridge.

APPLETON, WIS.—A. W. Priest has plans for the proposed Priest Memorial bridge to be erected in Riverside Cemetery. Bids will be received after May 15. It will be of reinforced-concrete construction, 93½ ft. long and 24 ft. 10 ins. wide.

MILWAUKEE, WIS.—Bi[illegible] be received until May 15 for constru[illegible] Oneida Wells St. bridge, estima[illegible] $120,000. Harry E. Briggs is Com[illegible] Wks. and L. J. Klug, Supt. of Br[illegible] Noted on March 7.

✚ESTHERVILLE, IOWA.—[illegible] are officially advised that bids [illegible] constructing several reinforced-concrete [illegible] bridges were received on April 2[illegible] [illegible]s: Federal Bridge Co., $5,086; Fe[illegible] [illegible]dge Co., $5,830; Geo. F. Ivory & C[illegible] [illegible] Dunnegan & Briggs, $8,950; N[illegible] [illegible]ARK & CO., Des Moines, Iowa, [illegible] awarded contract). Noted on April 2[illegible]

✚GUTHRIE CENTER, IO[illegible] [illegible] contract for the construction of [illegible] span 25-ft. roadway reinforced [illegible] bridge was awarded by the Guthri[illegible] Com-missioners on April 26 to N[illegible] [illegible]ARK & CO., Des Moines, Iowa.

✚BROOKSTON, MINN.—W[illegible] officially advised that the contract for [illegible]ting a steel bridge has been award[illegible] [illegible] CONTINENTAL BRIDGE CO. [illegible] [illegible]apolis, Minn., at $8,585.

LYONS, KAN.—Bids will b[illegible] received by the Board of County Comm[illegible] until May 8 for the erection of a co[illegible] bridge. O. Pulliam is County Clk.

✚GOLD HILL, ORE.—Contra[illegible] for constructing the Big Butte bridge [illegible] Derby and the Upper Sams Valley b[illegible] across the Rogue River have been aw[illegible] to the COLUMBUS BRIDGE CO. at [illegible]0 and $12,000, respectively. Both bridg[illegible] to be built under the supervision of W. W. Harnon, County Engr.

✚PENDLETON, ORE.—The [illegible] contract for the erection of the Main St. b[illegible] across the Umatilla River has been awa[illegible] to the COAST BRIDGE CO., of Por[illegible] The bridge is to be constructed o[illegible] and concrete, and the contract spe[illegible] that it must be completed by Aug. 15. The cost will be approximately $35,000.

HOLLISTER, CAL.—A. M. M[illegible], Surveyor of San Benito County, ha[illegible] a report with the County Supervisor[illegible] in which the estimates for repairs to t[illegible] county bridges and the construction of two new bridges is placed at $100,000.

EUREKA, CAL.—Bids will be received by George W. Cousins, Clk. Bd. of Supervisors of Humboldt County, until 2 p. m., May 9, for the construction of a pile trestle and fill on the road from the new Eel River bridge to Ferndale in Road District No. 1, in accordance with plans and specifications on file with the Clerk.

REDDING, CAL.—Bids will be received until 2 p. m., May 11, for constructing a low-truss bridge with concrete floor and foundation, about six miles south of Redding. R. L. Reading is County Surv.

✚SAN FRANCISCO, CAL.—We are officially advised that the contract for constructing a reinforced concrete viaduct on Mission St. was awarded, on April 26, to HEALY TIBBITTS CO., at $104,200. The other bidders were: Rickon Ehrlhardt, $113,950; Contra Costa Contracting Co., $112,000; American Contracting Co., $116,670.

MONTREAL, QUE.—The Canadian Pacific R. R. will soon call for bids for constructing a 500-ft. bridge near Graham, Ont.

ARDEN, MAN.—Bids will be received until May 9 by M. E. Boughton, Secy.-Treas. for the abutments and wing walls of a steel truss bridge, 30-ft. span, 18 ft. wide.

BUILDINGS.

*(*Denotes that this work is advertised in Engineering News.)*

BOSTON, MASS.—The architect for the new Roxbury High School will be James H. Ritchie, 8 Beacon St.

✚The contract for erecting the Minot Building on Spring Lane has been awarded to the GEORGE A. FULLER CO.

The architect chosen for the three buildings about to be erected for the Talitha Cumi Home is Edwin C. Stevens, 9 Park St., Boston, Mass.

MELROSE, MASS.—It is proposed to erect a Y. M. C. A. building to cost $15,000. F. P. Shumway is Chn. Bd. of Trus.

✚FALL RIVER, MASS.—The contract for the addition to the mill of the Standard Fabric Co. has been awarded to BEATTIE & WILCOX. This addition is 3-story, of brick and 92 × 200 ft. Edw'd L. Marvell is Arch. and Dr. John Gilbert is Pres. of Co.

ALBANY, N. Y.—Reports state that John DeWitt Warner, New York, appeared before the Senate Committee on Cities in advocacy of the bill of Senator Cullen, Chn. of the committee, embodying a comprehensive plan for the construction of freight terminal in New York, at a cost of $7,000,000.

ALBANY, N. Y.—In a communication to the Trustees of Public Buildings, State Architect Franklin B. Ware has included a very comprehensive scheme for the erection of a group of department buildings adjoining the State Capitol. He calls attention to the overcrowded condition of the Capitol building and to the inadequate quarters outside the Capitol which are now occupied by various State departments. Mr. Ware in his communication states that while the Capitol building may be extended westward, such a scheme is open to criticism. The State Architect's scheme suggests the construction of five buildings on the block adjoining the Capitol bounded by State, Hawk, Swan and Chestnut Sts. He suggests these buildings [illegible]uld be arranged as follows: First to be [illegible]cupied by the State Militia Department; [illegible]nd to be occupied by the finance dep[illegible]ments; including the Comptroller, Treas[illegible]r and Co-ordinate Departments; third, [illegible] the center, to be designed and us[illegible] as a hall of records, with fireproof vaults; fourth to be used by the department having in charge the conservation of the State resources, and fifth to be used by the [illegible]hnical departments, such as the State Engineer, Superintendent of Public Works, State Architect and Highway Department. An estimate

of the cost of the work approximates $9,000,-000. Mr. W[illegible] also believes that a building for the use of the Court of Appeals should be erected near the Educational Building so that easy a[illegible] could be had to the State Library, and suggests the acquisition of the block bounded by Capitol Pl., State and Swan Sts. and Washington Ave. for this purpose.

ALBANY, N. Y.—The Albany Order of Elks are about to construct a building to be used as clubhouse at 138 State St., and have accepted the plans prepared by Messrs. M. L. & [illegible] C. Emery, Bible House, New York. The building is estimated to cost about $10[illegible]. The building will be eight stories high [illegible] 3 × 254 ft., with an extension in the rear of two stories. The front will be of Indiana limestone and tapestry brick. The building will have electric lights and fixtures throughout, refrigerating plant, two electric elevators, five electric dumming waiters, partitions and floors of tile. In the basement will be janitor's quarters, engine room and kitchen. There will be 36 sleeping rooms, 40 to 50 lavatories, 40 to 50 water closets, 30 to 36 baths, parlors, lobby, office and three dining rooms (two private), a rathskeller, bowling alleys, billiard room, banquet hall and roof garden. The old buildings on the site will be razed after May 1. It is expected bids will be asked in about three weeks. George Addington is Chn. Building Committee, and William R. London is Secy., 34 Beaver St., Albany, N. Y.

✚GLEN COVE (L. I.), N. Y.—AUGUST E. HANSEN, Glen Cove, has been awarded the contract to build the school building for Glen Cove, on a bid of $58,000. There were 22 bidders.

✚HASTINGS, N. Y.—The Village Board of Trustees received the following bids for erecting a new high school: GEORGE T. KELLY, Yonkers, $40,888; Sarubbi Brothers, Yonkers, $41,000; Thomas Smith & Son, Newburgh, $42,200; Ernest Sargent, Hastings, $42,900; F. W. Walker, New York, $42,970; John M. B. Voss, Yonkers, $43,-898; Thomas Hogan, Hastings, $45,509; William Schmitz, Poughkeepsie, $45,700; Irving P. Bush, New York, $45,854; P. J. Flannery, Yonkers, $45,900; James S. Morse, Binghamton, $47,245; R. L. Stewart, Yonkers, $47,-500; Henry Booth, New York, $50,600; Benneo & Egan, New Rochelle, $63,666; Palmer & Ross, Hastings, $47,888.

NEW YORK CITY, N. Y.—Plans have been filed by J. Woolley, 200 Fifth Ave., for the construction of an 8-story loft building at 230-234 West 17th St., for the Ream Construction Co. The estimated cost is $130,000.

The Foxvale Realty Co., will erect three 4-story tenement buildings on the northwest corner of Washington Ave. and 185th St. Koppe & Daube, 830 Westchester Ave., N. Y. The probable cost is $55,000.

The Putnam Construction Co. has purchased two 15-story apartment buildings at 68-70 East 86th St., from Amelia Schiff and Wilson Marshall, Bridgeport, Conn. It is proposed to raze the present buildings and erect a 12-story apartment house. About $400,000 will be expended.

G. F. Pelham, 507 Fifth Ave., has prepared plans for the construction of a 7-story loft building on the west side of Clinton St., 50 ft. south of Delancey St., for the Charles I. Weinstein Realty Co. The estimated cost is $50,000.

A. L. Mordecai & Son has purchased from the Herald Sq. Holding Co., a site at 138 to 144 West 71st St., adjoins on the east the Church of the Sacrament. As soon as leases expire, the buildings will be razed and apartments will be erected.

Plans have been filed by G. F. Pelham, 507 Fifth Ave., for the construction of two 5-story tenement buildings on the northeast corner of Audubon Ave. and 169th St. The estimated cost is $105,000. The George A. Fisher Co., 144th St. and Broadway, is owner.

Harry Schiff, 467 West End Ave. has purchased two 3-story dwellings from Jessie B. Bingham, through Slawson & Hobbs, at the southeast corner of West End Ave. and 88th St. The owner will erect a 12-story fireproof apartment.

Plans have been filed by Foster, Gade & Graham, 15 West 38th St., for the construction of a 5-story dwelling at 122-124 East 78th St., for Mrs. Ethel M. Goodridge. The first floor will contain entrance vestibule and massive entrance hall, with dining room in the rear. On the second will be a salon in front, large hall and library in the rear. The third will contain a study in front, two bedrooms, sewing room and boudoir in the rear. On the fourth will be rooms for children and maids. Servants' bedrooms and storerooms will occupy the fifth floor. The cost is about $75,000.

✚The general contract has been awarded to the MACARTHUR CONCRETE PILE & FOUNDATION CO., 11 Pine St., New York, for the piling foundations of the Pilgrim Laundry building at Eleventh Ave. and 17th St., Brooklyn.

✚The general contract has been awarded to JOHN DOWNEY, 419 West 34th St., for the construction of a 5-story store and loft building at 48th St. and Fifth Ave., for Black, Starr & Frost, 438 Fifth Ave. Plans were prepared by Carrere & Hastings, 225 Fifth Ave. The cost is $350,000.

✚The general contract has been awarded to ROSENBERG & ARONSON, 89 Delancey St. for the construction of an 8-story loft building for Louis Kresner, 101 West 118th St. The site is owned by Catherine De Peyster, 277 Broadway. Plans were prepared by C. M. Straub, 147 Fourth Ave. The estimated cost is $40,000.

✚F. C. Zobel, 118 East 28th St., has awarded the general contract to the RUSSO & STOLA CONSTRUCTION & BUILDING CO., 1123 Broadway, for the mason work on two 12-story loft buildings to be constructed at 1[illegible]-149 West 29th St.

✚The general contract has been awarded to GILLIES CAMPBELL CO., 1 Madison Ave., for the construction of a 5-story dwelling at 122-124 East 78th St. Plans were prepared by Foster, Gade & Graham, 15 West 38th St. The estimated cost is $75,000. Mrs. E. M. Goodridge, 123 East 73d St. is the owner.

A 5-story tenement building will be erected by Henry Sullivan on the north side of 182d St., [illegible] ft. west of St. Nicholas Ave. Plans are being prepared by Euell & Euell, 103 East 125th St. The estimated cost is $50,000.

Plans have been completed by Schwartz & Gross, 347 Fifth Ave., for the construction of a 9-story elevator apartment house, on the north side of 81st St., west of Third Ave. The J. M. Slattery Building & Construction Co., 1230 Lexington Ave., is the owner. The estimated cost is $125,000.

Plans have been prepared by M. Zipkes, 103 Park Ave., for a building to be constructed on the site on the east side of Claremont Ave. The owner is the Clementine Realty Co., 103 Park Ave. The cost is $200,000.

Plans have been prepared by J. M. A. Darrach, 10 East 33d St., for the construction of a 9-story apartment house at 128-130 East 60th St. The estimated cost is $95,000.

Plans are being preparade by Goldner & Goldberg, 704 Westchester Ave., for the construction of two 5-story apartment buildings on the west side of Beck St., north of Longwood Ave. The estimated cost is $100,000.

Plans have been filed by Moore & Landsiedel, 148th St. and Third Ave. for the construction of a 5-story brick tenement building on Westchester Ave. The G. Evans Construction Co., 10 Palisade Ave., Yonkers, N. Y., is owner. The estimated cost is $50,000.

August Jacob, 1999 Morris Ave., will construct a 5-story brick tenement building on Morris Ave. The estimated cost is $40,000. John Hauser, 360 West 125th St. is Arch.

Plans are being prepared by Shampan & Shampan, 772 Broadway, Brooklyn, for the construction of a 4-story apartment house on the corner of Snediker and Pitkin Aves., Brooklyn, for the E. Glockman Building Concrete & Improvement Co.

The general contract has been awarded to McDermott & Hanigan, 31 West 42d St., for the construction of a 6-story college building for the Sisters of Charity of St. Vincent de Paul. Plans were prepared by I. E. Ditmars, 111 Fifth Ave., New York. The estimated cost is $100,000.

Plans have been prepared by Louis C. Maurer, 1493 Broadway, for the construction of a 5-story tenement building at 183d St. The Alexander Development Co., 15 Broad St. is owner. The estimated cost is $75,000.

Moore & Landsiedel, 148th St. and Third Ave., have completed plans for the construction of a 10-story elevator apartment building on the southwest corner of 179th St. and Broadway. Donald Robertson, 312 West 109th St., is the owner. The estimated cost is $350,000.

William Kurtzer, 192 Bowery, has prepared plans for the construction of a 5-story brick tenement house. The Wirth Realty & Construction Co., 862 West St. The estimated cost is $50,000.

Frank A. Rooke, 489 Fifth Ave., New York, is preparing plans for the construction of a dairy and stable building in Brooklyn, for the Sheffield Farms-Slawson Decker Co., 524 West 57th St., N. Y. C.

✚ROCHESTER, N. Y.—The contract has been awarded to the ALEXANDER SHUMWAY & UTZ CO., 16 State St., Rochester, N. Y., by the Eastman Kodak Co., Rochester, N. Y., for the three-story addition to their Camera Works Building on corner State and Kodak Sts. This addition is 72 ft. × 132 ft. and makes the building six stories and basement.

NEW YORK, N. Y.—Bids will be received by the Park Board, Department of Parks, Arsenal Bldg., Fifth Ave. and 64th St., until May 4 for the construction and completion of the foundations of additions F and G of the Brooklyn Institute of Arts and Sciences, Brooklyn.

SYRACUSE, N. Y.—Commissioner A. E. Perren, on behalf of the State Fair Commission, is urging an appropriation of $200,000 by the Legislature for a new cattle building on the State Fair Grounds here. He says that a bill for $40,000 for repairs and miscellaneous work about the grounds will be introduced.

EAST ORANGE, N. J.—It is reported that E. M. Potter, New York, N. Y., has prepared plans for the erection of a 5-story apartment house to be constructed at Central and Munn Aves. The cost is $130,000.

✚NEWARK, N. J.—The general contract has been awarded to WILLIAM H. FISSELL & CO., 1133 Broadway, for the construction of a 12-story office building on the corner Market and Beaver Sts. Aaron P. Ordway, 343 West 37th St., is owner. J. H. & W. C. Ely, 784 Broad St., is the Arch.

NEWARK, N. J.—A 5-story department store building will be erected on the southwest corner of Broad St. and Central Ave. by William Scheerer. The estimated cost is $100,000. William E. Lehman, New York, is Arch.

✚BRADDOCK, PA.—The contract has been awarded to the HODDER CONSTRUCTION CO., Braddock, Pa., for a building to cost about $85,000.

✚*HAZLETON, PA.—Bids were received as follows, on April 14 by the Board of School of Controllers for the construction of a high school building here: Andrew Breslin, Summit Hill, $110,059; C. H. Everett, Buffalo, N. Y., $104,500; S. Y. Frederick, Hazleton, Pa., $110,000; John Lowrey, New York City, $112,959; C. H. Mitchell Co., Binghamton, Pa., $117,000; H. J. Wenzelberger, Phillipsburg, N. J., $99,942; Wayne Con. Co., Philadelphia, Pa., $106,900; NIXON & LAMONT, Titusville, Pa., $87,979 (awarded contract); Beard Cons. Co., Reading, Pa., $111,-860; Glick & Burgett, Troy, N. Y., $93,394.

✚KITTANNING, PA.—The contract has been awarded to WASSON & CROYLE, Kittanning, for the construction of the proposed Anderson-Heilman building, on Fourth Ave.

✚PHILADELPHIA, PA.—The contract for furnishing structural steel amounting to 400 tons for Alexander Brothers Leather Belting Warehouse, was awarded to McCLINTIC-MARSHALL CONSTRUCTION CO., Pottstown, Pa. The inspection contract went to James G. Dempsey, Inspecting Engr., Philadelphia, Pa.

✚PHILADELPHIA, PA.—THE WILLIAM STEELE & SONS CO. have been awarded a contract for an eight-story commercial building, 72 × 125 ft. at 1427-29-31 Vine St., for Louis H. Belmont. The building will occupy the site of a storage house which was destroyed by fire several months ago. It was designed by Charles E. Oelschlager and will cost about $105,000.

READING, PA.—All bids have been rejected for the construction of the Carnegie Library for being in excess of the $100,000 at the city's disposal. The lowest bid was that of the George W. Beard Construction Co., Reading, at $124,000.

✚WILKES-BARRE, PA.—The following bids were received by the members of the School Board for the construction of the Franklin Building: John E. James, $108,000; A. M. Hildebrand, $109,900; George P. Eckert, $104,450; Sax & Abbott, $99,808; WILSON J. SMITH, $91,720 (awarded contract). Also for the Firwood Building: I. M. Leach, Jr., $114,796; WILSON J. SMITH, $94,313 (awarded contract); Reese D. Isaacs & Sons, $107,818; George P. Eckert, $105,650; A. M. Hildebrand, $109,000; Sax & Abbott, $101,-198; John E. James, $107,590.

WILMINGTON, DEL.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until June 7, for the extension, remodeling, etc. (including plumbing, gas piping, heating apparatus, electric conduits and wiring system and lighting fixtures), of the U. S. postoffice and court house at Wilmington, Del. Drawing and specification may be obtained from the Custodian at Wilmington, Del., or at the discretion of the Superv. Arch.

WASHINGTON, D. C.—Bids will be received soon by J. H. de Sibour for the wrecking of the Riggs House and the old Citizens' National Bank building on Fifteenth St., and the construction of the proposed Riggs Theater and office building upon the site now occupied by these two.

NORFOLK, VA.—The Norfolk Boat Club, Albert Roper, Commodore, plans to erect a $60,000 clubhouse.

ATLANTA, GA.—R. M. Clayton will receive bids until May 12 for the construction of changes and additions to buildings on Marietta St.

KNOXVILLE, TENN.—C. M. McClung & Co. will construct an addition to their building on West Jackson Ave. The estimated cost is $75,000. Baumann Brothers, Knoxville, Tenn., are the Archs.

✚MEMPHIS, TENN.—The FERRO CONCRETE CO., Cincinnati, Ohio, has been awarded the contract to erect the 6-story Lee building at Madison Ave. and Second St. The cost is $60,000.

CARLISLE, KY.—Bids will be received by the School Superintendent of Nicholas County until May 10 for erecting a schoolhouse.

SMITHLAND, KY.—Bids will be received by the School Board until May 13 for the erection of school building. W. E. Chipps is interested.

COLUMBUS, OHIO.—All bids on the Mifflin Township schools opened recently have been rejected by the Trustees and the work will be readvertised. The two low bidders, H. D. Carson and Hedrick Bros., have had their bids declared irregular.

MARION, OHIO.—Bids will be received by H. E. Hill, Cl. Bd. of Educ., until May 8, for the erection of a high school building. Marriott, Allen & Hall, 20 East Broad St., Columbus, Ohio, are Archs.

ALLIANCE, OHIO.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has rejected all bids recently received for U. S. post office at Alliance, Ohio, as being in excess of the appropriation. Congress will be asked to make an additional appropriation under which bids will be asked at a later date.

YOUNGSTOWN, OHIO.—Plans are being prepared by C. F. Owsley for the erection of a hotel on the Gillen property on Commerce St.

✚BRAZIL, IND.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded contract for the construction of a U. S. postoffice building at Brazil, Ind., to J. N. FAIRCHILD, Danville, Ill., at $55,665.

ROCKPORT, IND.—Bids will be received by the Board of Commissioners of Spencer County until June 6 for the erection of an asylum. Thomas H. Axton is Chn.

GRAND LEDGE, MICH.—The Board of Trustees will receive bids until May 10 for the construction of an edifice. E. M. Wood, Alma, Mich., is Arch.

SANDUSKY, MICH.—Bids will be received by Fred. J. Benedict, School Bd., until May 4 for erecting a 2-story brick addition to the school here.

✚DETROIT, MICH.—C. F. J. Barnes, 307 Sun Bldg., is preparing plans for a new 3-story and basement clubhouse and store building for the La Fayette Society. A. Ricklens, 535 Clinton Ave., is Secy.

✚Joseph E. Mills, 510 Washington Arcade Bldg., has awarded the general contract for the new 2-story and basement residence, 48 × 78 ft., for Henry H. Swan, 664 Woodward Ave., to J. H. A. HABERKORN, 380 14th Ave. The building will cost about $40,000.

✚Albert Kahn and E. Wilby, 800 Trussed Concrete Bldg., have awarded the following contracts for the 6-story and basement warehouse, 77 × 120 ft., for Joseph Boyer, 637 Woodward Ave.: Structural iron work, awarded to H. B. LEWIS, 45 Joseph Campau Ave., general contract let to BRYANT & DETWITER, 510 Hammond Bldg. Cost, $80,000.

David Stott, Grand River and Warren Aves., is contemplating erecting a new business building, 176 × 58 × 127 ft., at Michigan Ave. and Wayne St., at an estimated cost of $150,000, and a hotel at an estimated cost of $800,000. He is having plans prepared of both buildings. Donaldson & Meier, Penobscot Bldg., Detroit, will probably be the architects selected.

R. C. Gies & Co., 510 Wayne County Savings Bank Bldg., are preparing plans for a theatre building, 40 × 112 ft., for Philip Drinkhaus, 374 Illinois St.

GRAND RAPIDS, MICH.—R. A. LeRoy, 122 Pratt Bldg., Kalamazoo, Mich., is preparing plans for a large 2-story and basement theatre, 60 × 100 ft., for the United Theatre Co., c/o Gillingham & Smith, 103 Monroe St., Grand Rapids, Mich.

KALAMAZOO, MICH.—The Michigan National Guard of Kalamazoo, Mich., are contemplating the erection of an armory in Kalamazoo, Mich., at a cost of $40,000.

The Masonic Lodge of Kalamazoo, Mich., F. B. Fay, Chn. of Building Committee, c/o Michigan Buggy Co., are contemplating a new Masonic Temple to be called the "Clark Memorial Temple." Estimated cost, $100,-000.

LENNOX, MICH.—Peter Dederich, 1307 Chamber of Commerce Bldg., Detroit, Mich., is preparing plans for a new church, 59 × 120 ft., for the St. Augustine Roman Catholic Church of Lennox, Mich. Architect will take figures on structure soon. Cost, about $50,000.

CHICAGO, ILL.—J. C. Tevinson is taking figures on a theatre and office building to be erected at 63d St. and Langley Ave. The approximate cost is $75,000. Address care Architects Hall & Westerland, 169 West Washington St.

CHICAGO, ILL.—Plans are being prepared by Henry Wittikind, 38 South Dearborn St., for the erection of a $125,000 hotel building on the corner of Rogers Ave. and Forest St.

Plans are being prepared by Holabird & Roche for a 9-story office and printing building to be erected by Rand, McNally & Co., 173 West Adams St.

The Blakely Printing Co., 126 Market St., will erect an 8-story reinforced-concrete printing building on the corner of Market and Congress Sts. Plans are being prepared by Perkins, Fellows & Hamilton, 6 North Clark St., Chicago, Ill.

KNOXVILLE, ILL.—Bids will be received by F. E. Wilson, Secy. Bd. of Educ. until May 6 for construction of a 2-story brick addition to the high school here.

CHICAGO, ILL.—Christian A. Londelius will erect a building containing 36 apartments, at a cost of more than $100,000 on 141 ft. of vacant land which he has purchased on Prairie Ave., about 150 ft. north of 57th St., from the Shearer estate of Boston and Mrs. Jane Lasher. The plans for the building have not been completed, but the apartments will contain four and five rooms each.

ROCKFORD, ILL.—The Board of Education will receive bids until May 8 for the erection of a 12-room school building. Probable cost is $65,000.

MILWAUKEE, WIS.—A permit has been taken out by the School Sisters of St. Francis of St. Joseph's convent for the erection of an $80,000 hospital building at Twenty-seventh Ave. and Orchard St. The building will be three stories high and will have two wings. It will be of fireproof construction.

TONY, WIS.—Bids will be received until May 9 by F. A. Heine for erecting a school.

FORT ATKINSON, WIS.—Van Ryn & DeGelleke, Milwaukee, Wis., are preparing plans and specifications for a high school building for the city of Fort Atkinson, to cost approximately $65,000 equipped. It will be 100 × 120 ft. in size, of solid brick construction, two stories high. Bids will be taken after May 15.

✚FOREST JUNCTION, WIS.—William F. Hilgen, Cedarburg, Wis., awarded the general contract for the erection of a brick and stone banking house for the Junction State Bank to FRANK L. WOLF, Two Rivers, Wis.

NEENAH, WIS.—The Treasury Department has closed the deal for the purchase of a site for the new $50,000 Government building and post-office here. James Knox Taylor, Superv. Arch., is now preparing plans and it is expected to start work late this year.

MILWAUKEE, WIS.—The County Board of Supervisors has commissioned Allen D. Conover, Engr., Madison, Wis., to prepare a program for an architects' competition for the privilege of drawing the plans for the proposed new Milwaukee County House of Correction. The program will be ready for architects about May 15.

Brust & Phillip, Camp Bldg., are completing plans for the proposed $200,000 banking house for the Marshall & Ilsley Bank on East Water St., between Wisconsin and Mason Sts. Bids for excavation are being received and other work will be let after May 25. James K. Ilsley is Pres.; John H. Puelicher is Cashr.

Meyer J. Sturm, Chicago, Ill., is preparing plans for a $70,000 addition to Milwaukee Hospital, State St., between 22d and 23d Sts. It will be four stories high, 108 × 47 ft. in size, of reinforced-concrete and brick construction, steel-trussed. Bids are being received. Rev. H. L. Fritschel is Director.

✚Marshall & Fox, Chicago, Ill., awarded the contract for razing all buildings on the solid block to be the site of the proposed $2,500,000 home office building of the Northwestern Mutual Life Insurance Co., to MILWAUKEE WRECKING CO. Excavating contracts will be awarded about June 1 and other contracts from June 15 to July 1.

KANAWHA, IOWA.—Bids will be received by the School Board of School Dist. No. 7, until May 27 for the construction of a school building.

PANORA, IOWA.—Bids will be received by George A. Goetzman, Secy. Board of Directors, until May 12 for the erection of an addition to the public school building.

ST. PAUL, MINN.—Preliminary plans for the construction of an addition to The Emporium department store at Seventh and Robert Sts., are being prepared by Buechner & Orth, 500 Shubert Bldg., St. Paul, Minn. The structure will be four stories in height, fireproof and cost between $75,000 and $100,-000.

WILLMAR, MINN.—The State Board of Control, P. M. Ringdahl, Chn., will soon receive bids for the construction of an institute for inebriates to be built at Willmar, Minn. Plans are now being completed by C. H. Johnston, 715 Capital Bank Bldg., St. Paul, Minn., and call for the construction of several fireproof buildings. Cost, $150,000.

MOUNTAIN IRON, MINN.—The Board of Education will receive bids until May 8 for constructing a school. Bray & Nystrom, Duluth, Minn., is Arch.

LIBERAL, KAN.—Bids will be received by the Board of County Comrs. until May 15 for the construction of a jail and sheriff's dwelling. P. H. Weathers, Hall Bldg., Kansas City, Mo., is Arch.

*OSWEGO, KAN.—Bids will be received by the Board of Directors of the Oswego Free Public Library Ass'n until May 10 for the construction of a library building. F. M. Brady is Pres.

TOPEKA, KAN.—Bids will be received by C. W. Gibbs, Secy. State Bd. of Control of the State Charitable Institution, until May 8 for constructing a reception hospital.

NORTH PLATTE, NEB.—Bids were received as follows, on May 2, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a U. S. post-office building at North Platte, Neb.: (a) limestone, (b) sandstone construction: King Lumber Co., Charlottesville, Va., (a) $98,000, (b) $100,000; L. Butke, Omaha, Neb., (a) $78,900; J. N. Fairchild, Danville, Ill., (a) $88,084, (b) $89,411; J. E. & A. L. Pennock, Philadelphia, (a) $89,787, (b) $91,287; Conners Bros. Co., Lowell, Mass., (a) $101,000; Northwestern Construction Co., Wahpeton, N. Dak., (a) $99,000, (b) $100,500; Latimer & Benning, Kansas City, Mo., (a) $87,229; General Construction Co., Milwaukee, Wis., $87,530.

HERMAN, NEB.—Bids will be received until May 13 by the Board of Education for the construction of a school. B. F. Miller, 732 Brandeis Theatre Bldg., Omaha, Neb., is Arch.

IPSWICH, S. DAK.—The Board of County Commissioners will receive bids until May 9 for erecting a jail and sheriff's dwelling. J. W. Henry, Aberdeen, is Arch.

McCLUSKY, N. DAK.—Bids will be received by R. E. Schultz, Clk. School Bd., until May 10 for the construction of a school. J. W. Ross, Grand Forks, N. Dak., is Arch.

GRAFTON, N. DAK.—Bids will be received by Dr. A. R. T. Wylie, Supt. of the Institution for Feeble Minded, until May 9 for the erection and completion of a 3-story and basement fireproof building. Hancock Bros., Grand Forks, N. Dak., are Archs.

HOUSTON, TEX.—A motion picture theatre will probably be constructed by the Dixie Film Co., on Prairie Ave. and Main St. The cost is about $75,000.

SULPHUR SPRINGS, TEX.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until May 31, for the construction of a U. S. post office complete.

WICHITA FALLS, TEX.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until June 6 for the construction of a U. S. post office.

VICTORIA, TEX.—Bids will be received until 3 p. m., June 9 by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a U. S. post-office at Victoria, Tex.

✚DALLAS, TEX.—THE AMERICAN CONSTRUCTION CO., Houston, has been awarded the contract for the construction of the new 16-story office building of the Southwestern Life Insurance Co. in this city. The building will cost $650,000.

✚DALLAS, TEX.—The Dallas Cotton Exchange has obtained a permit from the city building inspector to erect a 7-story reinforced-concrete fireproof building at the corner of Akard and Wood Sts., to cost $150,000, exclusive of plumbing, wiring and equipment. The AMERICAN CONSTRUCTION CO., Houston, has the contract. Lang & Witchell are the Archs.

WHARTON, TEX.—The Galveston, Harrisburg & San Antonio R. R. Co. will erect a large new passenger station here. Its general offices are at Houston.

NOWATA, OKLA.—Bids will be received until May 8 by Edward Elliott, Clk., for the construction of a court-house.

VIÑITA, OKLA.—Bids will be received until May 8 by C. M. Howard, Secy. State. Bd. of Pub. Wks., for the construction of a hospital for the insane. C. W. Dawson, Muskogee, Okla, is Arch.

*STERLING, COLO.—Bids will be received by Rev. C. W. Huett, Rector of the First Methodist Episcopal Church, until May 6 for the construction of a stone and brick church. J. P. Eisentraut, Hot Springs, S. Dak., is Arch.

SALT LAKE CITY, UTAH.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded the contract for the construction of a U. S. postoffice extension of Salt Lake City, Utah, to the CAMPBELL BUILDING CO., Salt Lake City, Utah, at $153,047; time to complete, June 1, 1913.

BREMERTON, WASH.—Bids were received as follows on May 1 by the Quartermaster of the Marine Corps, Navy Dept., Washington, for the construction of a marine barracks at the Navy Yard, Bremerton, Wash.: W. M. Concannon, San Francisco, $159,890; William Hamilton, Des Moines, Iowa, $145,000; McClellan Hickey Co., Seattle, Wash., $139,235; T. Strausser & Sons, Spokane, Wash., $154,008; Puget Sound Bridge & Dry Dock Co., Seattle, Wash., $149,993; W. W. Anderson & Co., San Francisco, $135,628.

ONTARIO, ORE.—Plans have been completed for the construction of the proposed high school building here. The estimated cost is $40,000. In addition to the proposed school a 4-room school building will be erected in East Ontario.

SAN FRANCISCO, CAL.—Bids will be received until May 10 by J. L. McCormick, Secy., Bd. Pub. Wks., for shop building for Polytechnic High School; also separate bids for plumbing, heating and electric wiring.

CORNWALL, ONT.—Bids will be received by A. I. MacDonel, County Clk., for the erection of a county house of refuge and industy until May 2. A. L. Weeks, Ottwaa, Ont., is Arch.

ISABELLA, MAN.—Bids will be received until May 3 by S. P. Heise, Chn. Bldg. Com., for the construction of a brick edifice for the Presbyterian congregation.

WATER SUPPLY—IRRIGATION.

(✚Denotes a contract awarded.)

FORT McKINLEY, ME.—Bids were received as follows on April 15 by Capt. J. F. Gohn, Const. Q. M., U. S. A., Portland, for the construction and installation of a chemical water-softening plant of 15,000 gallons capacity: L. M. Booth Co., 116 Liberty St., New York, complete, $6,870; Item (1) $4,800, (2) $550, (3) $970, (4) $550; The Kennicott Co., Chicago Heights, Ill., Item (1) $5,500; American Water Softener Co., 1011 Chestnut St., Philadelphia, Pa., complete, $7,300; Item (1) $4,950; Northern Water Softener Co., Madison, Wis., Item (1) $4,400, (2) $750, (3) $1,300; William Graver Tank Works, Rookery Bldg., Chicago, Item (1) $4,150 and $3,980, (2) $1,260, (3) $2,065; Reisert Automatic Water Purifying Co., 30 Church St., New York, Item (1) $3,475, (2) $285, (3) $485, (2) and (3) $1,064; Gem City Boiler Co., Dayton, Ohio, Item (1) $5,570, (2) $1,770, (3) $3,645, (4) $850; Pittsburg Filter Mfg. Co., Pitsburg, Pa., Item (1) $6,475, (2) $675 and $375, (3) $2,225; Frank H. Marshall, South Portland, Me., Item (4) $439; Felber Engineering Works, Inc., New York, complete, $6,750, not complying with specifications, Item (4) not included in price.

BOSTON, MASS.—The Metropolitan Water and Sewerage Board is about to lay approximately 15,000 ft. of 24-in. water pipe in order to supply Hyde Park, which has voted to join the Metropolitan Water District. Henry H. Sprague is Chn. Bd.

SPRINGFIELD, MASS.—The city will enlarge the water-works system. Estimated cost, $9,000. J. W. Hartigan is Water Comr.

*HOLYOKE, MASS.—Bids will be received until noon, May 15, by the Water Commissioners for a concrete dam across Manhan Brook, in Southampton, Mass.

*PITTSFIELD, MASS.—Bids will be received until 2 p. m., May 15, by the Board of Public Works for laying water pipes. For details, see advertisements in this issue.

✚NORWICH, CONN.—The Board of Water Commissioners has awarded the contract to the PETROSSI CO., of Hartford, Conn., for the construction of the Stony Brook dam and reservoir. Estimated cost, $320,000. Noted on March 9.

*NEW YORK, N. Y.—Bids will be received until 11 a. m., May 23, by the Board of Water Supply, 165 Broadway, for the completion of the Hudson siphon. For details, see advertisement in this issue.

JAMESTOWN, N. Y.—Chester & Fleming, Consult. Engrs., Union Bank Bldg., Pittsburg, Pa., who are investigating the water-supply system here, by direction of the Water Commission, have recommended a 5-million storage reservoir on English Hill, at a cost of $117,859, including large inlet and outlet mains. Another plan suggested is a reservoir of the same size on Mee Hill.

MALONE, N. Y.—The taxpayers have voted to spend $25,000 for laying an additional 12-in. water-supply pipe from Horse Brook to Shepard Bridge. C. W. Russell is Supt. W.-Wks.

SODUS, N. Y.—The town is considering the construction of a water-works system. Estimated cost, $25,000. A. Hopkins is Chn. Water Com.

✚*SKILLMAN, N. J.—We are officially advised that the HARRISON CONSTRUCTION CO., of Newark, N. J., has been awarded the contract for the extension of the water system at the New Jersey State Village for Epileptics here, at $9,883. Bids were opened on May 1.

LEBANON, PA.—Bids were opened as follows on April 20 by the city for a horizontal, cross-compound crank and flywheel pumping engine, with a capacity of 2,500,000 gallons in 24 hours: (a) including foundations; (b) without foundations: Snow Steam Pump Works, Roberts Ave., Buffalo, N. Y., (a) $14,075, (b) $13,500; Allis-Chalmers Co., Milwaukee, Wis., (a) $16,650, (b) $15,100; Platt Iron Co., Dayton, Ohio, (a) $14,140, (b) $13,548.

✚PITTSBURG, PA.—The Department of Public Works has awarded the contract to WILLIAM KERR'S SONS, Lewis Bldg., Pitsburg, for constructing the Mission St. pumping station, at $93,200. List of bidders noted on April 27.

✚SOMERSET, PA.—We are officially advised that bids were received April 27 by the Borough Council for the construction of a concrete reservoir, the borough to furnish all iron work. The contract has been awarded to W. G. FERNER, of Somerset, at $4,191.

✚WASHINGTON, D. C.—The following contracts for furnishing Portland cement for use in connection with the various Government irrigation projects have been awarded by the Secretary of the Interior: UNION PORTLAND CEMENT CO., of Ogden, Utah, 16,500 bbls. for the Idaho District, at $1.30 per bbl. f. o. b. Devil's Slide, Utah; HENRY COWELL LIME & PORTLAND CEMENT CO., of San Francisco, Cal., 15,000 bbls. for the Washington District, at $1.24 per bbl. f. o. b. cars, Bay Point, Cal.; PACIFIC PORTLAND CEMENT CO., of San Francisco, 9,000 bbls. for the Umatilla and Klamath projects, Oregon, at $1.32 per bbl. f. o. b. cars Tolenas, Cal.; RIVERSIDE PORTLAND CEMENT CO., of Los Angeles, Cal., 4,000 bbls. for the Yuma project, Arizona-California, at $1.80 per bbl., and a credit of 10 cts. each for sacks returned; PORTLAND CEMENT CO., of Salt Lake City, Utah, 12,000 bbls. for the Strawberry Valley project, Utah, at $1.50 per bbl. f. o. b. cars at Salt Lake City, Utah.

FARMVILLE, VA.—The town has voted $65,000 of bonds for the purchase and improvement of water-works. The sum of $48,000 will be expended for the purchase of the plant and the balance for improvements and extensions. Noted on March 30.

CHRISTIANSBURG, VA.—The city has voted to issue $40,000 of bonds for the construction of water-works.

FORT MYER, VA.—Bids will be received until 11 a. m., May 25, by Capt. Warren W. Whiteside, Const. Q. M., U. S. A., for the construction of about two miles of 10-in. water-mains.

BLACK MOUNTAINS, N. C.—The city has voted $15,000 of bonds for the construction of water-works and a sewer system. Noted on March 23.

CONCORD, N. C.—The city will construct water-works. Bonds for $50,000 for the work are available.

BARNESVILLE, GA.—The city has voted $15,000 of bonds for extensions to the water, sewer and light systems.

OGELTHORPE, GA.—Bids will be received about July 1 by the city for the construction of a water-works system. C. A. Allison is interested.

BIRMINGHAM, ALA.—The State Senate has passed a bill empowering the city to acquire and operate water-works and electric light plants.

AMORY, MISS.—The city has voted $65,000 of bonds for the installation of water-works and sewer systems. E. C. Dalrymple is City Clk.

BASSFIELD, MISS.—Bids will be received until May 5 by the city for the construction of a water-works system. Xavier A. Kramer is Engr., Magnolia, Miss.; J. P. Dear is Clk. Noted on April 27.

HOMER, LA.—H. W. Wright, Homer, has been engaged by the city to prepare plans for the construction of the water-works system.

✚OWENSBORO, KY.—The contract has been awarded to R. P. FARNSWORTH and L. M. BOOTH for the construction of the proposed water softening plant. Estimated cost, about $25,000.

NILES, OHIO.—Bids will be received by the Board of Control until May 10 for a 3,000,000-gallon water filtration plant. All bids received on April 18 were rejected.

CINCINNATI, OHIO.—Bids will be received until May 9 by the city for laying c.-i. pipe, specials, and valves in Lick Run Road, Boudinot Ave., Mozart Ave., Walnut St. and Harrison Pike.

✚CLEVELAND, OHIO.—We are officially advised that contracts have been awarded by the Water Department as follows: For two 25,000,000-gallon pumps, to the HOLLY MFG. CO., Roberts Ave., Buffalo, at $112,769 each; for 3 to 24-in. c.-i. pipe, to the U. S. CAST IRON PIPE & FOUNDRY CO., Cleveland, at $24.35 per ton; for 3 to 16-in. specials, to same, at $53 per ton; for 20 to 24-in. specials, to the BOWKER FOUNDRY CO., at $58.75 per ton; for miscellaneous castings, to same, at $48.75 per ton; for 4 to 6-in. hydrants, to FLORENCE IRON WORKS, at $24.75 and $40.75, respectively; for valves, to the FAIRBANKS CO., at the following prices: 24-in., $163; 20-in., $105; 16-in., $53; 12-in. $26.85; 10-in., $21; 8-in., $14.75; 6-in., $9.45; 4-in., $5.80; 3-in., $4.20.

CLINTON, IND.—The City Council has taken steps to build and equip a new water-works plant. William Hamilton is Pres. W.-Wks. Bd.

EVANSVILLE, IND.—The city will ask for bids soon for the construction of an earthen embankment at an approximate cost of $15,000 and for interior suction and discharge pipes for two low-lift pumps and two high-lift pumps; also steam piping, at an approximate cost of $30,000. Alvord & Burdick, 1417 Hartford Bldg., Chicago, are Engrs.

AKRON, MICH.—Bids will be received by the Well Committee until May 10 for the construction of six wells.

STANFORD, ILL.—Bids will be received by W. C. Murphy, Village Clk., until 2 p. m., May 22, for the construction of a system of water-works. Plans may be seen at the office of Melluish & Broyhill, Engrs., Bloomington, Ill.

✚CHICAGO, ILL.—The contract for laying water pipe in portions of Bishop and 105th Sts., has been awarded to WALTHER & SUHR.

✚CHICAGO, ILL.—The contract has been awarded to THOMAS L. DOOLEY, Chicago, for cleaning water basins at $13,375. B. J. Mullaney is Comr. Pub. Wks.

JOLIET, ILL.—The citizens on April 18 voted bonds for $35,000 for sinking and equipping two artesian wells in connection with the betterment of the water system of the city. Matt. Bersoneid is City Clk. Noted on March 23 and 30.

ANNA, ILL.—Water-works will be constructed here. Bids will probably be received about June 1. Estimated cost, $19,724.

SHEBOYGAN, WIS.—The City Water Commission has recommended the purchase and installation of a 12,000,000-gallon pumping engine and improvements costing $50,000.

LA CROSSE, WIS.—Bids will be received by the Board of Public Works until 2 p. m., May 23, for furnishing and delivering, f. o. b. La Crosse, c.-i. pipe, hydrants, valves, etc.

*SIOUX CITY, IOWA.—Bids will be received until 10 a. m., May 13, by the City Clerk for valves and hydrants. Bidders will present their specifications with bids. G. B. Healy is Supt. Parks and Public Property.

DULUTH, MINN.—Bids w[illegible] be received by the Board of Water and [illegible]ht Commissioners until 9 a. m., May [illegible] for laying a 6-in. water and 4-in. gas [illegible] in Regent St., from 43d Ave. East to [illegible] Ave. East. Obtain specifications of L. N[illegible], Mgr.

✚CHOKIO, MINN.—We a[illegible] [illegible]cially advised that the contract f[illegible] [illegible]onstructing water-works here has been [illegible]ded by the village to J. G. ROBERTSO[illegible], St. Paul, Minn., at about $8,776.

NORTH MANKATO, (Mank[illegible]) MINN.—L. Donohue, Village [illegible] [illegible] ceive bids until 7.30 p. m., M[illegible] [illegible] construction of a water-work[illegible] [illegible]ost-office) will be received on electric p[illegible] [illegible] will re- ment, and alternate bids on [illegible] [illegible] for the ment. Separate bids will b[illegible] [illegible]tem. Bids reservoirs and pump house, p[illegible] [illegible]ng equipment, water mains and well. [illegible] [illegible]ne equipment is Engr., Mankato. Noted on [illegible] [illegible]eived on [illegible]ng equipment [illegible]n Wilson [illegible]il 6.

MITCHELL, S. DAK.—L. [illegible] Audr., will receive bids until 8 [illegible] [illegible]ess, City for 6,900 ft. of 2-in. water ma[illegible] May 8, rate bids for laying, including [illegible] and separate valves, crosses, etc. [illegible] hydrants,

PIERRE, S. DAK.—See item [illegible] [illegible]r Streets and Roads.

MOORECROFT, WYO.—The [illegible] will vote on May 9 on a bond issue for [illegible]ter-works improvements. Charles F. [illegible] [illegible]lling is Town Clk. Noted on March 30.

BILLINGS, MONT.—The Yell[illegible]one Irrigation District is planning to i[illegible] a system for irrigating 14,000 acres [illegible] and The district has sold the bonds for [illegible]truction purposes. Estimated cost, $2[illegible] [illegible]ooo. The Henry Gerharz Engineering Co[illegible] Babcock Block, Billings, Mont., is Engr.

MONROE CITY, MO.—Bids w[illegible] be received until May 5 by the city [illegible] a well, 1,000 to 2,000 ft. Burns & M[illegible]onell are Engrs., Scarritt Bldg., Kansas C[illegible] Mo.

✚MOBERLY, MO.—We are o[illegible]ially advised that contracts were award[illegible] as follows on April 22 by the city for [illegible] reconstruction of the water-works pl[illegible] General contract to the COMMERC[illegible]L CONSTRUCTION CO., Kansas City, M[illegible] at $21,323, and $1 per cu. yd. for ext[illegible] concrete and 40 cts. per cu. yd. for extra earth excavation; power-house, to G. A. [illegible]NCLAIR, Moberly, at $9,191.

FORT STOCKTON, TEX.—The [illegible]ort Stockton Land & Irrigation Co., it i[illegible] reported, is arranging to extend its canal [illegible] tem and construct additional water storage [illegible] reservoirs to bring an additional 30,000 acre[illegible] of land under cultivation. It has locat[illegible] several reservoir sites.

TOYAH, TEX.—The Toyah & [illegible] Lake Irrigation Co. which has been orga[illegible]ized with a capital stock of $1,500,000 will [illegible] is reported, construct large water sto[illegible] reservoirs at the base of the Davis Moun[illegible]tains and establish a system of irrigation to reclaim about 60,000 acres of land in the Toyah Creek Valley.

McALESTER, OKLA.—The citizens on April 22 voted to issue $80,000 of bonds for constructing dam and pipe [illegible] to Gaines Creek. W. P. Halliday i[illegible] City Engr. Noted on April 20.

TULSA, OKLA.—The city is planning to make improvements to the water-works system. Estimated cost, $40,000.

OLATHE, COLO.—We are officially advised that bids will probably be asked in about a month for the installation of a municipal water system here. Estimated cost, $58,000. Mattie A. Burns is Town Clk.; George H. Sethman is Engr., Denver, Colo. Noted on April 20.

STERLING, COLO.—Bids will be received by the Board of Directors of the West Sterling Irrigation District until 10 a. m., May 12, for the construction of a distributing canal or ditch, bridges across the ditch, headgate, wasteways and dam in the South Platte River. E. C. Withrow is Dir.

✚BOISE, IDAHO.—Bids were received on April 26 by the U. S. Reclamation Service, Los Angeles, Cal., for furnishing hydraulic turbines for the Boise project, Idaho. The contract has been awarded to the PELTON WATER WHEEL CO., San Franci[illegible]o, Cal., at $9,740.

CARSON CITY, NEV.—We are officially advised that bids have been received as follows by the U. S. Reclamation Service, Los Angeles, for the 72-in. penstock for the Truckee-Carson project, Nevada: (a) Item 1, (b) Item 2, (c) Item 3, (d) Item 4: The Kennicott Co., Chicago Heights, Ill., (a) 28 cts., (b) 5 cts.; Chicago Bridge & Iron Works, Chicago, Ill., (a) 3 cts., (b) 5 cts., (c) $2,000, (d) $1,875; Wm. B. Pollock Co., Youngstown, Ohio, (a) 3.26 cts., (b) 4.13 cts., (c) $5,225, (r) $4,308; Schaw Batcher Co., Pipe Works, Sacramento, Cal., (a) 3.75 cts., (b) 5.5 cts.

✚PHOENIX, ARIZ.—The Secretary of the Interior has awarded the contract to CHAS. A. HASKIN, Jamaica Plain, Boston, Mass., for furnishing a compressed air plant for use in the construction of the siphon under the Colorado River in connection with the Yuma irrigation project, Arizona, the work to be completed within six weeks. The lease includes the installation of the plant and the services of the contractor in starting it satisfactorily, together with the services of a competent superintendent during the progress of the work. This siphon, which is [illegible]000 ft. long with a diameter of 15 ft., connects the main canal on the California side with the irrigation system which will supply the valley below Yuma, Ariz. A power plant will be established later at the Arizona end to lift water to the mesa lands in the immediate neighborhood of Yuma.

*NORTH YAKIMA, WASH.—The Secretary of the Interior has authorized [illegible] Reclamation Service to construct by [illegible]ce account the Kachess dam, Yakima [illegible]igation project, Wash. All bids received [illegible] April 15 were considered excessive and a failure to complete the dam for operatio[illegible] during the coming season would seriously [illegible]pardize the interests of the Yakima project, [illegible] Secretary decided it to be to the int[illegible]ests of

the United States that the work be immediately undertaken by force account. This dam will ... the outlet of Lake Kachess on the head water of Kachess River, a small tributary of Yakima River. It will be an earth-fill structure with a maximum height of 68 ft., crest length of 1,500 ft., and a volume of about 250,000 cu. yds. Upon its completion Lake Kachess will have a storage capacity of 210,000 acre-ft. of water which will be used in the development of the Yakima irrigation project. Noted on March 2.

✚SEATTLE, WASH.—The Board of Public Works has awarded to the JAHN CONTRACTING CO., Leary Bldg., Seattle, the contract for the Grand Boulevard water-mains, at ...,410.

HAINES, ORE.—The citizens have voted to issue ...,000 of bonds for the installation of a water-works system.

GRESHAM, ORE.—We are officially advised that bids for the construction of the water-works distributing system and sanitary sewerage system here will be received the latter part of May. Louis C. Kelsey is Engr., Selling Bldg., Portland, Ore.

PORTLAND, ORE.—Bids will be received until May 9 by the Water Board for furnishing ... lengths of 12-in., 3,500 lengths of 8-in. and 1,320 lengths of 6-in. c.-i. pipe and 100 tons of special castings. D. D. Clarke is Engr. Bd.

ANAHEIM, CAL.—Bids will be received until May 11 by the City Trustees for furnishing the following apparatus for the water-works plant: One compound automatic steam engine, a 150-KVA., 2,200-volt, 3-phase, 60-cycle alternating current generator; an exciter for generator; generator switchboard panel; building foundations and erecting engine and generator. A. L. Lewis is Supt. Municipal Light and W.-Wks.

SPOONVILLE, CAL.—The Baxter Creek Irrigation Co., is considering the construction of a reservoir in Spoonville from plans by T. J. Maror, of Spoonville. Estimated cost, about $150,000.

✚ANAHEIM, CAL.—The Anaheim Water Co. has awarded the contract to CHARLES SCHENDLER, of Anaheim, for constructing 6,000 ft. of reinforced-concrete pipe for the company's system.

BAKERSFIELD, CAL.—The Western Water Co. has been organized here with a capital of $200,000 for the purpose of erecting two large pumping plants to be equipped with two 200-HP. gasoline engines and two pumps of 25,000 bbls. capacity. The other plant will have one unit of the same capacity. The plants will supply water to the west side oil fields.

ESCONDIDO, CAL.—Contracts have been awarded as follows by the Escondido Water Co.: To A. S. BENT, Central Bldg., Los Angeles, Cal., for constructing 2,400 ft. of 8-in. cement pipe; to A. G. THORNTON, of Colton, Cal., for 4,000 ft. of 12-in. cement pipe. Later on contracts will be awarded for 5,000 ft. of 20 to 24-in. reinforced-concrete pipe. The company will lay 2,500 ft. of 2-in. pipe for transmitting compressed air to the mountains for tunnel drilling purposes.

LINDSAY, CAL.—Haviland & Tibbetts, Consult. Engrs., Alaska Commercial Bldg., San Francisco, have been engaged by the Board of Trustees in connection with proposed water-works construction.

✚LOS ANGELES, CAL.—The contract has been awarded to the REINFORCED CONCRETE PIPE CO., Central Bldg., Los Angeles, for constructing concrete siphons in San Bernardino County for the Bear Valley Mutual Water Co., one siphon to be 24-in. diameter, 1,200 ft. long, to replace steel siphons; also for six siphons, 24-in. diameter and total length of 1,500 ft.

✚LOS ANGELES, CAL.—The contract has been awarded to the WESTERN GAS ENGINE CO., 908 North Main St., Los Angeles, by the Patton & Langley Co. for a complete pumping plant at Lankershim.

OXNARD, CAL.—The City Engineer has been instructed to prepare estimates of cost for constructing a complete water system.

SACRAMENTO, CAL.—The Sacramento Sierra Power & Water Co. has been formed here with a capital of $2,000,000. The directors are: Charles C. Chapman, Charles L. Barsotti, John Muldoon, Dudley Smith and C. J. Lancaster. The company proposes to supply water for various purposes to the adjoining counties.

SAN DIEGO, CAL.—Bids will be received by P. E. Woods, Supt. Water Dept., until May 22, for furnishing 8,536 lengths of c.-i. water pipe from 8 to 36-in. f. o. b. San Diego, delivery to commence on or before July 24 and be completed on or before Dec. 15.

SAN DIEGO, CAL.—Bids will be received until 11 a. m., May 22, by the Department of Finance, Ways and Means, for furnishing to the city iron water pipe. Percival E. Woods is Supt.

✚SAN FRANCISCO, CAL.—The Board of Public Works has awarded to MICHAEL MURPHY the contract for laying pipe for the auxiliary water system in the district bounded by Van Ness Ave. on the east, Devisadero St. on the west, Duboce Ave. and Market St. on the south and Pacific Ave. on the north, at about $107,903.

MONTREAL, QUE.—Bids will be received until May 15, it is reported, by the Board of Control for filteration plant machinery, including pumping machinery, rotary blowers, cranes, etc.

OTTAWA, ONT.—Bids will be received until ... p. m., May 29, by R. C. Desrochers, Secy. Dept. Pub. Wks., Ottawa, for the construction of a dam and spillway at Kipawa Village, Pontiac County, Que.

✚ST. CATHERINE'S, ONT.—The contract has been awarded to the NATIONAL IRON WORKS, of Toronto, Ont., for the supply of 3,... tons of standard piping, at $30.50 per ton, and 55 tons of special castings, at $39.

LONDON, ONT.—Bids will be received until noon, April 27, by the Board of Water Commissioners for water-works supplies for the current year.

TORONTO, ONT.—Bids will be received until June 6 by the Chairman of the Board of Control for pumps, vertically driven, etc. C. H. Rust is City Engr.

BURNABY, ONT.—Bids will be received by the city until May 31 for the supply of 66,500 ft. of water piping ranging in diameter from 18 to 24 ins.

WELLAND, ONT.—The ratepayers have carried the by-law providing for $75,000 for extensions and additions to the water-works. G. H. Burgar is Clk. and Treas.

✚MOOSE JAW, SASK.—We are officially advised that the contract for furnishing water meters has been awarded by the city to the NEPTUNE METER CO., Walsh & Charles, Agts., Winnipeg, Man.

✚SASKATOON, SASK.—We are officially advised that contracts have been awarded as follows by the City Commissioners: Contract 89, furnishing c.-i. pipe, to the GARTSHORE-THOMSON CO., of Hamilton, Ont., Contract 90, valves and hydrants, to the CANADIAN FAIRBANKS CO.; Contract 92, manhole frames and covers, to JOHN A. EAST FOUNDRY CO., of Saskatoon. George T. Clark is City Engr.

SASKATOON, SASK.—Bids will be received by the City Commissioners until April 28 for laying water and sewer mains.

VANCOUVER, B. C.—Contracts have been awarded to EVANS, COLEMAN & EVANS, of Vancouver, for 6-in. steel pipe, at $39.82; 8-in. same, at $57; 12-in. × 3/16-in. same, at $112; 12-in. × ¼-in. same, at $136; pig lead, $3.62.

SEWERS.

*(*Denotes that this work is advertised in Engineering News.)*

SOUTH GLENS FALLS, N. Y.—Bids will be received until June 1 by C. W. Skym, Village Clerk, for the construction of a system of sewers and a disposal plant. W. H. Reynolds is Vil. Engr.

*FULTON, N. Y.—Bids will be received by the Board of Public Works at their office until 8 p. m., May 15, for the following approximate quantities: 8,500 lin. ft. of 8-in. vitrified pipe sewer, 4,500 lin. ft. of 6-in. vitrified pipe sewer, 900 lin. ft. of 10-in. vitrified pipe sewer, 20 manholes, 14 flush tanks, 400 "Y" branches. For details see advertisement in this issue.

*NEW ROCHELLE, N. Y.—Bids will be received by the Board of Public Works until May 4 for the construction of sewers. Richard Lathers, Jr., is Chn.

WASHINGTON, D. C.—Bids were received as follows on May 1 by the Commissioners of the District of Columbia for the construction of sewers in the District of Columbia (Cleveland Park): George Hyman, excavation, $2.40; sewer brick masonry, $14; 10-in. sewer, 55 cts. Warren F. Brenizer Co., excavation, $1.40; sewer brick masonry, $14; 10-in. sewer, 70 cts.

WASHINGTON, D. C.—Bids will be received until 2 p. m., May 8, by the Commissioners of the District of Columbia for the construction of 1,200 ft. of sewer in First St., Southeast, Washington, D. C.

*AUBURN, ALA.—Bids will be received until May 15 by R. W. Burton, Town Clk., for constructing approximately 7,423 ft. of 8-in. sanitary sewers. (For details see advertisement in this issue.)

BUCYRUS, OHIO.—The City Council has declared it necessary to construct and maintain a sewage disposal plant connected with the sewage system of Bucyrus.

COLUMBUS, OHIO.—The City Council Finance Committee has approved an ordinance providing a $50,000 bond issue which provides sewers from Cleveland Ave. to Howard St., and another from Cleveland Ave. to St. Clair Ave., all in Milo.

AUBURN, IND.—Bids will be received for the construction of two storm sewers and their laterals until 7.30 p. m., May 15, of which the following are approximate estimates of quantities: Wagoner storm sewer—34 ft. monolithic or reinforced pipe, 48-in. inside dia.; 3,056 ft. monolithic or reinforced pipe, 42-in. inside dia.; 1,023 ft. vitrified sewer pipe, 20-in. inside dia.; 183 ft. vitrified sewer pipe, 12-in. inside dia.; 475 ft. catch basin connections, vitrified pipe, 12-in. inside dia.; six concrete manholes, 4-ft. inside dia.; 32 concrete catch basins, 3-ft. inside dia.; two lamp holes; one bulkhead. Tenth St. storm sewer—34 ft. monolithic or reinforced pipe, 48-in. inside dia.; 2,652 ft. monolithic or reinforced pipe, 42-in. inside dia.; 1,841 ft. monolithic or reinforced pipe, 36-in. inside dia.; 1,058 ft. vitrified sewer pipe, 20-in. inside dia.; 745 ft. catch basin connections, vitrified pipe, 12-in. inside dia.; seven concrete manholes, 4-ft. inside dia.; 42 concrete catch basins, 3-ft. inside dia.; three lampholes; one concrete bulkhead.

DETROIT, MICH.—The Common Council of the City of Detroit at a special meeting held April 27 authorized the issuance of bonds by the Water Commission for the following improvements: Completing the new 48-in. high pressure force main in Forest and Bewick Aves., $302,000; 48-in. force main through central part of city in Charlevoix, Berlin, Erskine and Alexandrine Aves., $1,152,000; completing 48-in. main in High, Baker and Dix Aves., $536,000; 42-in. main in Jefferson Ave. West, from Solvay to Home Sts., $81,000; 48-in. main in Michigan Ave., from Vinewood to Livernois, $172,000; 24-in. main in Holbrook Ave., $35,000; 24-in. main in Carbon, Forman and Fort Sts., $68,000; 24-in. main in Hazelwood and Holcomb Aves., from Russell to Third Sts., $48,000; 42-in. main in Canfield and Bethune Aves., from Helen Ave. to North Grand Boulevard, $28,000; improvements at pumping station, $1,631,769. J. J. Haarer, Commissioner of Public Works.

AURORA, ILL.—Bids will be received in from 30 to 60 days for the construction of 9-in. to 30-in. pipe sewer and 42-in. to 48-in. concrete sewer. Approximate cost, about $120,000. M. J. Tarble is City Engr.

PARK RIDGE, ILL.—This city will construct 7,000 ft. of 6-ft. concrete sewer. C. N. Roberts, C. E., 105 Clark St., Chicago, Ill., is preparing the plans.

PROPHETSTOWN, ILL.—Bids will be received by the Commissioners of Union Special Drainage District in Henry and Whiteside Counties, until May 4 for laying a 12-in. drain, 6,300 ft. in length.

✚MILWAUKEE, WIS.—The Department of Public Works awarded the contract for constructing a concrete sewer in Third St. to R. J. HICKEY, Milwaukee, at $15.87 per ft. Total cost, $45,802. Harry E. Briggs is Comr. of Pub. Wks.

COUNCIL BLUFFS, IOWA.—Bids will be received by Charles J. Duff until May 8 for the construction of sewers.

FAIRFIELD, IOWA.—We are officially advised that this city will soon construct a sanitary sewer system. J. P. Starr is Mayor.

VALLEY JUNCTION, IOWA.—We are officially advised that bids will be received in about 60 days for the construction of a sanitary sewer system and disposal plant. Approximate cost about $45,000. The Iowa Engineering Co., Clinton, Iowa, is Engr. J. W. Mullane is City Clk.

AUSTIN, MINN.—Bids will be received by the Common Council until May 5 for the construction of sewers. M. C. Clausen is City Engr.

GILBERT, MINN.—Bids will be received May 8 for the construction of a sewer at an approximate cost of $30,000. F. A. Bowman is Engr.

HUTCHINSON, KAN.—Bids will be received until May 9 by the City Board of Commissioners for the construction of sewers. G. L. McLane is City Engr.

AUBURN, NEB.—Bids will be received until May 15 by the City Clerk for the construction of about 1,400 ft. of 8-in. sewer, manholes, flush tank, lamphole and connections.

ST. LOUIS, MO.—The lowest bidder for the construction of sewers in Washington Heights First Addition Storm Water Sewer District was the P. J. Clifford Contracting Co. at $31,386.

KERRVILLE, TEX.—The South Texas Engineering & Construction Co., San Antonio, is negotiating with the Business Men's Club here looking to the construction of a complete system of sewers for the town. G. T. Dougherty is acting as the company's representative.

*MUSKOGEE, OKLA.—Bids will be received by the City Council May 23 for the construction of a portion of the Coody Creek Sanitary Outfall Sewer. The work includes Sections 1 to 6, inclusive. Section 1 embraces 5,200 ft. of 48 in. sewer; Section 2 embraces 5,000 ft. of 48 in. sewer; Section 3 embraces 5,600 ft. of 48 in. sewer; Section 4 embraces 5,400 ft. of 48 in. sewer; Section 5 embraces 6,500 ft. of 45 in. sewer; Section 6 embraces 7,100 ft. of 42 in. sewer. Alternative bids are asked for two ring brick with vitrified invert and manufactured concrete pipe. (For further details see advertisement in this issue.)

LAS VEGAS, N. MEX.—Bids will be received until May 17 by Charles Tamme, City Clk., for the construction of a sanitary sewer.

MULLAN, IDAHO.—Bids will be received until May 10 by the Sewer Committee for the construction of sewers.

ELMA, WASH.—Louis C. Kelsey, C. E., Selling Bldg., Portland, Ore., has been employed by the city of Elma, Wash., to prepare plans, specifications and estimates for increasing the water supply by means of pumping and for the installation of a sewerage system.

HILLSBORO, ORE.—Plans, specifications, etc., have been prepared by Louis C. Kelsey, C. E., Selling Bldg., Portland, Ore., for sanitary and storm sewerage systems and street pavements for the city of Hillsboro, Ore. The sewerage systems are estimated to cost $83,247 and the pavements $59,355. Separate contracts will be let for the sewerage and the street paving, and bids for construction will be invited about June 1.

GRESHAM, ORE.—See item under Water Supply—Irrigation.

NEWPORT, ORE.—The estimated cost of the sanitary sewerage system for the city of Newport, Ore., according to plans and specifications prepared by Louis C. Kelsey, Consult. Engr., Selling Bldg., Portland, Ore., is $64,023. F. B. Davis is City Engr. Bids for construction will be invited during the coming summer.

ST. JOHN, N. B.—Bids will be received until May 12 for the furnishing and delivering of vitrified salt glazed sewer pipe for the village of Fairville. Gilbert C. Murdoch is Engr.; J. King Kelley is County Secy.

MONTREAL, QUE.—Chief Engineer Janin has presented a report to the Board of Control showing a total expenditure of $3,000,000 during the coming season which will be required for sewers, pipes, sidewalks and pavements.

PERTH, ONT.—Bids will be received up to April 28 by John A. Kerr, Town Clk., for construction of various sewers in the town of Perth.

NORTH TORONTO, ONT.—Bids will be received until May 15 by Frank Howe, Chn. Wks. Com., Eglington, Ont., for the providing and laying of sanitary pipe sewers, as follows: Contract No. 1 includes approximately sewers to streets and trunk sewers south of and including Eglinton Ave; Contract No. 2 includes approximately sewers to streets and trunk sewers north of Eglinton Ave. and south of and including Glenview Ave. to the west of Yonge St., and south of and including Victoria Ave. to the east of Yonge St.; Contract No. 3 includes approximately sewers to streets and trunk sewers north of Glenview Ave. to the west of Yonge St., and south of and including Victoria Ave. to the east of Yonge St. Plans and specifications may be obtained from T. Aird Murray, 303 Lumsden Bldg., Toronto, Ont.

OTTAWA, ONT.—Dr. J. W. S. McCulloch, Dr. Charles Hodgetts, Allen Hazen, C. E., of New York, and Charles Keefer, C. E., and Prof. Schutt, have been appointed a commission to investigate the best source of water supply for Ottawa and to recommend a plan of sewage disposal for that city.

ESQUIMALT, B. C.—Arrangements are being made for the construction of a sewerage system here to cost $125,000. Address A. R. Wolfenden.

GARBAGE DISPOSAL.

(✚Denotes a contract awarded.)

BUFFALO, N. Y.—Bids will be received until May 6 by F. G. Ward, Comr. Pub. Wks., for building the foundations for the 40-ton Heenan Froude 3-gate destructor boiler, hot-air duct, flue and blower, removal of present old Morse-Boulger destructor, the placing of present 125-HP. Geary water-tube boiler and building setting for the same.

NEW YORK, N. Y.—Bids will be received by Lawrence Gresser, Pres. Boro. Queens, until 11 a. m., May 11, for the final disposition of garbage in the Fifth Ward of the Borough of Queens, of the City of New York, during the months of June, July, August and September, 1911, and furnishing and operating the necessary dumps, scows, tugs, tools, appliances and labor therefor.

The following report, printed in the issue of April 20, is denied by the Street Cleaning Department: "✚NEW YORK, N. Y.—The KINDLING MACHINERY CO., Louis Kindling, Pres., Milwaukee, has been awarded the contract for furnishing 150 patent Kindling street sprinklers of the squeegee type to the Street Cleaning Department."

AKRON, OHIO.—Bids will be received until noon, May 5, by the Board of Control for sweeping various streets daily, from May 1 to Nov. 15, 1911. John W. Gauthier is Dir. Pub. Ser.

INDIANAPOLIS, IND.—The Board of Public Works will receive bids until May 25 for the removal of garbage. Plans and specifications are ready for bidders. Chris. Schrader is Chn.

NORTH CHICAGO, ILL.—Bids will be received by the Navy Department, Washington, D. C., until noon, May 15, for a garbage crematory at the Naval Training Station, Great Lakes, North Chicago.

LA CROSSE, WIS.—Anthony Murphy, City Health Officer, has recommended the construction of a small incinerator for garbage disposal to replace the present system.

✚GALVESTON, TEX.—The City Commission has let the contract for the installation of a garbage crematory here to the SPECIALTY ENGINEERING CO., of Houston, Tex., at $8,500.

STREETS AND ROADS.

(Denotes that this work is advertised in Engineering News.)*

✚BOSTON, MASS.—We are officially advised that bids for street improvement have been received as follows: On April 25, for building a macadam roadway in Hazelton St., between Blue Hill Ave. and about 546 ft. northwesterly, Wm. J. Rafferty Co., $4,489 (including local stone), $4,574 (including trap rock); John Kelly & Co., $4,581, $4,666; Connolly & Diamond, $4,795, $4,965; Daniel E. Lynch, $5,269, $5,439; James Doherty, $4,463, $4,463.

For building a macadam roadway in Corey Road, between Washington St. and about 620 ft. southwesterly, R. J. Young & Co., $4,713, $5,016; J. C. Coleman & Sons Co., $4,588; John Kelly & Co., $4,216, $4,317; Wm. Rafferty Co., $4,741, $4,741.

✚On April 26, for paving and regulating Haverhill St., between Haymarket Square and Causeway St.: Peter W. Hill, $12,525; F. S. & A. D. Gore Corp., $12,565; John F. O'Connell, $12,633; F. H. Cowin Co., $12,610; R. J. Young & Co., $14,982; Wm. J. Rafferty Co., $13,454; Connolly & Diamond, $12,900; COLEMAN BROS., $12,393 (awarded contract); C. W. Dolloff & Co., $12,968, Rockport granite; C. W. Dolloff & Co., $12,410, New Hampshire granite. Louis K. Rourke is City Engr. and Supt. Paving. Noted on April 20.

BOSTON, MASS.—Bids will be received by Louis K. Rourke, Comr. Pub. Wks., until May 9, for constructing artificial stone sidewalks in Spencer St., Dorchester District.

Bids will be received until May 8 for constructing a tar macadam roadway and artificial stone sidewalks in Wales St., Dorchester District, for constructing retaining walls and fences on Washington St., west Roxbury District, and for cleaning sewers in various parts of the city.

BOSTON, MASS.—Bids were received on April 29 by the Bureau of Yards and Docks, Navy Department, Washington, for paving at the Boston Navy Yard, as follows: Under Item 4, the following unit prices, (a) vitrified brick, per sq. yd.; (b) concrete pavement, per sq. yd.; (c) standard-gage track, per lin. ft.; (d) concrete curb, per lin. ft.; (e) 6-in. terra cotta pipe drains, per lin. ft.; (f) catch-basins, each: C. M. Leach, Box No. 2285, Boston, Mass., (1) $12,383; (2) $10,383; (3) $7,783; (4) (a) $3, (b) $2.45, (c) $6, (d) 50 cts., (e) $1.45, (f) $63; James F. Ferguson, 22 Parkman St., Boston, (1) $9,745, (2) $9,074.50, (3) $8,230.50; Michael Seretto, 42 Court St., Boston, (1) $8,173, (2) $6,302.25, (3) $4,765, (4) (a) $2.50, (b) $2.50, (c) $2.25, (d) 55 cts., (e) 50 cts., (f) $35; McCarthy & Walsh, 454 Saratoga St., East Boston, (1) $10,700, (2) $9,110, (3) $7,100, (4) (a) $1.77, (b) $5.83, (c) $5.83, (d) 24 cts., (e) 41 cts., (f) $52.90; William L. Dolan, 44 Tower St., Boston, (1) $9,000, (2) $8,701.50, (3) $6,381, (4) (a) items 1 and 2, $2.70; item 3, $2.75; (b) item 1, $1.35;

items 2 and 3, $1.50; (c) item 1, $3; items 2 and 3, $4; (d) 70 cts., (e) 60 cts., (f) $60; John F. O'Connell, 49 North Marginal St., Boston, (1) $10,687.25, (2) $9,054.25, (3) $6,-964.10, (4) (a) $2.925(b) $1.80, (c) $5.412, (d) 35 cts., (e) 60 cts., (f) $55; John F. Coleman, 1 Marginal St., Chelsea, Mass., (1) $12,286, (2) $10,264, (3) $8,049, (4) (a) $3.05, (b) $1.60, (c) $6, (d) 70 cts., (e) 50 cts., (f) $75. Noted on March 30.

✚LOCKPORT, N. Y.—Bids were received on April 27 for constructing the new Carmon, Town Line road, in the Town of Hartland and Royalton, as follows: C. B. Whitmore Co., Lockport, $17,700; JOHN BAMBRICK, HARTLAND, $13,539 (awarded contract); John C. Taylor, Hartland, $13,970; Rhodey & Tyler, Albion, $14,611.

✚POUGHKEEPSIE, N. Y.—The Board of Public Works has awarded to C. W. CROCKETT, Torrington, Conn., the contract for laying 44,000 sq. ft. of cement walk at 17 cts., and 1,900 lin. ft. of curb at 54 cts. Other bidders were: John Martin, 17 cts. and 65 cts.; Concrete Construction & General Contracting Co., 16 cts. and 55 cts.

*POUGHKEEPSIE, N. Y.—Bids will be received by the Board of Public Works, City of Poughkeepsie, until 4 p. m., May 11, for constructing cement concrete sidewalk. Address the Board of Public Works for contract and specifications. R. J. Shields is Clk.

SCHENECTADY, N. Y.—The special committee appointed to investigate, favors the widening of Jay St., between State and Union Sts., and the extension of the street, from State St. to Smith and South Center Sts., at an estimated cost of $1,050,000, in preference to the expenditure of $600,000 for widening Lafayette St.

TROY, N. Y.—Bids for paving Fourth St., from Fulton to Grand Sts., have been received by the Board of Contract and Supply, as follows: For wood block pavement, John H. Gleason & Co., $6,977; cement concrete pavement, Walter E. Hassam, $5,058; vitrified brick pavement, Edward Walsh, $5,-444; granite block pavement (Hassam construction), John H. Gleason & Co., $6,977; Walter E. Hassam, $7,403; granite block pavement, William T. Behan, $6,465; Edward Walsh, $6,216. James M. Riley is Secy. Bd.

*ALBANY, N. Y.—Bids for the improvement of public highways by State aid were received on April 26 by the State Commission of Highways at their office, No. 53 Lancaster St., Albany, as follows:

✚Ticonderoga-Crown Pt., Part 1, County Highway No. 891, Essex County, 5.99 miles; Brown & Lowe Co., Schenectady, $61,394 for Residuum, $64,586 for Bermudez, and $63,-788 for Trinidad; The Sherrill Hardware & Plumbing Co., Hudson Falls, $57,630, $60,523 and $60,413; Fred. E. Ellis, Melrose, Mass., $58,350, $59,757 and $59,757; Buckley Construction Co., Plattsburg, $58,440, $62,800 and $62,000; Flood & Van Wirt Co., Hudson Falls, $60,000, $63,511 and $64,300; SANTANONI CONTRACTING CO., Newcomb, $56,989 (awarded contract on Residuum), $60,181 and $59,383.

✚Millerton-Columbia County Line, County Highway No. 709, Dutchess County, 4.70 miles; Samuel Beskin, Fishkill-on-Hudson, $42,500; James E. Martin, Poughkeepsie, $45,498; Thos. H. Karr, Troy, $43,750; E. W. Peck, Stratford, Conn., $45,950; Jos. Walker, New Paltz, $42,883; LANE CONSTRUCTION CO., Meriden, Conn., $41,390 (awarded contract).

✚Pleasant Valley-Washington Hollow, County Highway No. 748, Dutchess County, 5.46 miles; SAMUEL BESKIN, Fishkill-on-Hudson, $63,325 (awarded contract); Olin T. Benedict, Pittsfield, Mass., $85,000; James E. Martin, Poughkeepsie, $64,839; E. W. Peck, Stratford, Conn., $69,450; Jos. Walker, New Paltz $69,586; Lane Construction Co., Meriden, Conn., $72,520.

✚Broadway-Depew, County Highway No. 914, Erie County, 3.63 miles; NIAGARA CONSTRUCTION CO., Corning, N. Y., $79,-470 (awarded contract); Dollard & Herrion, Albany, $80,544; Frank L. Cohen, Buffalo, $82,900; Busch & Percival, Buffalo, $83,985; Erie Contracting Co., Buffalo, $85,000; Ed. T. Beck & Co., Warren, Pa., $82,550.

✚Lancaster Village, County Highway, No. 915, Erie County, 1.46 miles; Ed. T. Beck & Co., Warren, Pa., $71,675; Frank L. Cohen, Buffalo, $73,700; NIAGARA CONSTRUCTION CO., Corning, $68,800 (awarded contract); Robert N. Hanson, Geneva, $71,-470; Hurley & Lyne, Fredonia, $69,800; Dollard & Herrion, Albany, $72,522; The Constantine Construction Co., Buffalo, $71,-238; Erie Contracting Co., Buffalo, $74,000.

✚Depew Village, County Highway No. 916, Erie County, 2.30 miles; ED. T. BECK & CO., Warren, Pa., $53,750 (awarded contract); Mulderry Bros., Albany, $56,680; Dollard & Herrion, Albany, $55,709; Frank L. Cohen, Buffalo, $56,800; Erie Contracting Co., Buffalo, $56,700.

Lancaster-Alden, County Highway No. 917, Erie County, 4.11 miles. No bids received.

✚Burrells-Middleville, County Highway No. 466, Herkimer County, 5.58 miles; Newport Contracting Co., Newport, $74,000 for Residuum, $74,500 for Bermudez and $74,400 for Trinidad; BUCKLEY CONSTRUCTION CO., Plattsburg, $69,342 (awarded contract on Residuum), $71,947 and $71,889; Brown & Lowe Co., Schenectady, $75,282, $75,514 and $75,456.

Livonia-Ontario County Line, County Highway No. 717, Livingston County, 5.83 miles; Niagara Construction Co., Corning, $60,000; John F. Dolan Construction Co., N. Y. City, $57,000; Carlton-Reynell, Long Island City, $53,225; Northwestern Construction Co., Franklin, Pa., $54,986. Contract not awarded; above estimate.

✚Fort Plain Village, County Highway 889, Montgomery County, .64-mile; Kennedy Construction Co., Albany, $8,673 for Residuum, $8,907 for Bermudez and $8,846 for Trinidad; JOSEPH WALKER, New Paltz, $7,204, $7,587 (awarded contract on Bermudez) and $7,-491.

✚Little Neck-Old Westbury, Parts 1 and 4, State Highway No. 5106, Nassau County, 2.46 miles; Andrews Bros., Mineola, $26,-691 for Residuum, $28,282 for Bermudez and $28,243 for Trinidad; H. J. Mullen, Jamaica, $26,500, $28,100 and $28,100; CLANCY & VAN ALST, Astoria, $25,980 (awarded contract on Residuum), $27,144 and $27,144; John L. Cashman, Brooklyn, $26,500, $28,000 and $27,650; Suffolk Contracting Co., Huntington, $26,000, $27,164 and $27,300.

Skaneateles-Camillus, Part 2, County Highway No. 897, Onondaga County, 4.24 miles; Monroe Roads Co., Pittsford, $54,000 for Residuum, $56,000 for Bermudez and $56,-000 for Trinidad; Thos. Meehan, Philadelphia, Pa., $52,947, $54,614 and $53.952; P. H. Murray, Rochester, $49,370, $52,328 and $51,836; Daniel I. Mott, Utica, $52,590, $54,-680 and $54,680; John F. Dolan Contracting Co., New York City, $59,800, $61,500 and $60,000; J. H. Weidman, Syracuse, $50,-600, $53,100 and $53,100; W. H. BURNS CO., Syracuse, $48,389 (R. O. W.), $50,356 and $49,864; Jos. McCormick, East Providence, R. I., $53,680, $55,640 and $55,150; Wayne Contracting Co., Newark, $49,930, $51,730 and $51,742.

✚Rockland County Line-Tuxedo County Highway No. 416, Orange County, 5.89 miles; SPROUL & ELSIN, Peekskill, $86,-230 (awarded contract); W. H. Ring, Kingston, $88,888; Salmon Construction Co., Netcong, N. J., $105,217; Samuel Beskin, Fishkill, $89,500; James E. Martin, Poughkeepsie, $92,894; Schunnemunk Contracting Co., Highland Mills, $92,900.

✚Brainard Station Highway No. 5108, Rensselaer County, .35 miles; Kennedy Construction Co., Albany, $5,269 for Residuum, $5,473 for Bermudez and $5,473 for Trinidad; KROW & WALSH, Pittsfield, Mass., $4,385, $4,650 (awarded contract on Bermudez) and $4,600.

✚Euba Mills-New Russia, Highway No. 5117, Essex County, 6 miles; Powers-Mansfield Co., Troy, $81,805 for Residuum, $85,-363 for Bermudez and $84,474 for Trinidad; J. D. MOYNEHAN CO., Mohawk, $74,989, $78,547 and $77,651 (R. O. W.); Buckley Contracting Co., Plattsburg, $83,245, $89,000 and $88,000; Brown & Lowe Co., Schenectady, $88,979, $92,437 and $91,647.

✚Atlanta-North Cohocton, County Highway No. 904, Steuben County, 1.64 miles; Fred E. Ellis, Melrose, Mass., $15,893; Thomas J. Ford, Elmira, $15,436; Niagara Contracting Co., Corning, $16,000; T. H. GILL CO., Whitneys Point, $14,420 (awarded contract); Dale Engineering Co., Utica, $17,-580; F. B. Meckes, Long Pond, Pa., $15,638; Greece Contracting Co., Rochester, $15,000.

✚Troupsburg Center-South Troupsburg, Highway No. 905, Steuben County, 3.90 miles; Breeze Contracting Co., Elmira, $40,-590 for Residuum, $42,718 for Bermudez, $42,186 for Trinidad; T. H. Gill Co., Whitney's Point, $46,166, $48,100 (R. O. W), and $48,100; Northwestern Construction Co., Franklin, Pa., $45,141, $47,269 and $46,737.

✚Stone Bridge-Falls Mills, Highway No. 824, Sullivan County, 3.34 miles; Hallock & Angle, Newburgh, $52,808 for Residuum, $55,085 for Bermudez and $54,630 for Trinidad; BELLEW & MERRITT CO., Tuckahoe, $42,850 (awarded contract on Residuum) $44,250 and $45,000; Fred E. Ellis, Melrose, Mass., $48,709, $49,541 and $49,541; James E. Martin, Poughkeepsie, $52,000, $54,000 and $53,800; Richard Hopkins, Troy $46,722, $49,000 and $49,000; B. D. Pierce, Jr., Co., Bridgeport, Conn, $43,120, $44,030 and $44,-030.

✚Rifton Village, County Highway No. 921, Ulster County, 2.13 miles; James E. Martin, Poughkeepsie, $31,494 for Residuum, $32,900 for Bermudez and $32,600 for Trinidad; L. F. Bannon P. H. & C. Co., Kingston, $29,728, $31,092 and $30,776; JOSEPH WALKER, New Paltz, $27,594, $28,706 (awarded contract on Bermudez), and $28,-428; Thomas H. Karr, Troy, $30,700, $31,700 and $31,600; Samuel Beskin, Fishkill-on-Hudson, $29,119, $30,383 and $30,000; S. B. Van Wagonen, Rondout, $29,836, $31,258 and $31,258; Sproul & Elsin, Inc., Peekskill, $29,800, $31,000 and $32,000; Kennedy Construction Co., Albany, $36,363, $37,373 and $37,373; DeGraff & Hogeboom, $34,000, $36,-000 and $36,000; Halleck & Andel, Neuburg, $29,997, $31,893 and $31,577; Lane Construction Co., Meriden, Conn., $31,000, $32,200 and $32,000.

✚Clyde-Resort, Part 1, County Highway No. 919, Wayne County, 3.87 miles; Dale Engineering Co., Utica, $30,265; Monroe Roads Co., Pittsford, $26,200; Thomas Grady & Co., Rochester, $24,950; GREECE CONSTRUCTION CO., Rochester, $23,850 (awarded contract); D. L. Mott, Utica, $25,-590.

✚Woods Bridge-Lewis Corners, County Highway No. 900, Westchester County, 4.26 miles; James Garafano, Mt. Vernon, $49,000 for Residuum, $51,500 for Bermudez and $50,800 for Trinidad; Frank J. Fowler Construction Co., Mt. Kisco, $46,188, $48,540 and $48,540; James E. Martin, Poughkeepsie, $53,500, $56,000 and $55,500; E. W. Peck, Stratford, Conn., $51,800, $54,400 and $54,-400; Harvey B. Sproul, Inc., Peekskill, $45,-480, $47,800 and $49,000; C. F. Jordan & Co., $50,643, $52,995 and $52,995; SAMUEL BESKIN, Fishkill, $44,825 (R. O. W.), $46,-500 and $45,800; B. D. Pierce, Jr., Co., Bridgeport, Conn., $52,037, $54,000 and $54,-000; Olin T. Benedict, Pittsfield, $59,999, $61,999 and $61,999; Amos D. Bridge Sons, Hazzardville, Conn., $51,947, $53,947 and $53,947; Suffolk Contracting Co., Huntington, $51,990, $53,154 and $53,350.

Canastota Village, County Highway No. 908, Madison County, 2.07 miles: Schunnemunk Contracting Co., Highland Mills, $63,-900 for Residuum, $64,550 for Bermudez, and $64,550 for Trinidad; Alonzo Schaupp, Albany, $60,390, $61,200, and $61,000; Central City Paving Co., Syracuse, $54,173, $54,825, and $54,825; James E. Martin, Poughkeepsie, $57,500, $58,300, and $58,200; Mulderry Bros., Albany, $57,240, $57,895, and $57,732; Ballard & Mahar, Oneida, $54,-000, $54,652, and $54,489; Henry P. Burgard Co., Buffalo, $49,731, $50,383, and $50,-220; Ballard & Mahar, Oneida, $59,400, $60,-000, and $59,500; Warren Bros. Co., Boston, Mass., $52,217, $53,869, and $53,706.

Port Jefferson-Caram, Highway No. 912, Suffolk County, 6.69 miles; B. D. Pierce, Jr. Co., Bridgeport, Conn., $74,400 for Residuum, $78,000 for Bermudez, and $77,000 for Trinidad; Thomas F. Shaughnessy Co., Albany, N. Y., $76,000, $82,000, and $81,000; Frank J. Gallagher, Brooklyn, N. Y., $85,000, $89,-741, and $88,691; Town of Brookhaven, N. Y., $81,956, $86,156, and $85,106; H. J. Mullen, Jamaica, $83,900, $88,100 and $88,-100; Suffolk Construction Co., Huntington, N. Y., $84,248, $87,396, and $87,900; Wm. P. McDonald Contracting Co., Mt. Vernon, $74,350, $77,690, and $77,690; Clancy & Van Alst, Astoria, $75,886, $79,033, and $79,033.

✚Bliss-Smith Corners, County Highway No. 893, Wyoming County, 3.61 miles: Frederick J. Mumm, Buffalo, $49,590 for Residuum, $52,000 for Bermudez, and $52,500 for Trinidad; Greece Construction Co., Rochester, $48,800, $50,950, and $51,000; Niagara Construction Co., Corning, $52,500, $54,700, and $54,100; THOMAS E. MURRAY, Troy, $44,400 (awarded contract for Residuum), $47,234, and $46,675; Schroeder Hicks Construction Co., Rochester, $48,000, $50,200, and $49,600; John E. Johnson & Co., Buffalo, $47,760, $48,878, and $49,436; Frank Foote, Nunda, N. Y., $46,775, $49,-000, and $49,000.

Canton-Potsdam, Part 1, and Canton-De-Kalb, 5115-16, combined, St. Lawrence County, 10.19 miles; BUCKLEY CONSTRUCTION CO., Plattsburg, $99,940 for Residuum (awarded contract on Residuum), $109,802 for Bermudez, and $108,370 for Trinidad; Burns Bros. & Haley, Watertown, $101,966, $108,000, and $108,000; A. J. Rockwood, Rochester, $101,000, $109,000, and $109,000.

NOTE:—The letters R. O. W. indicate that award is made subject to acquisition by county of right of way.

*ALBANY, N. Y.—Bids were received by the State Commission of Highways on April 28, as follows:

✚Glen Aubrey - Whitney Point, County Highway No. 902, Broome County, 5.30 miles: Thomas Meehan & Sons, Philadelphia, Pa., $55,751; T. H. GILL & CO., Whitney Point, $52,354 (R. O. W.).

✚OLEAN CITY, State Highway No. 5099, Cattaraugus County, .36 miles: H. E. Burkes & Co., Olean, $14,200; James V. Sapienza, Buffalo, $12,990; Dunkirk Construction Co., $13,839; B. V. TAILOR, Olean, $11,867 (awarded contract); J. C. Stoll, Portville, $14,333; D. D. Dugan, Olean, $15,497; Troy & Mack, Olean, $14,078.

✚Auburn City, State Highway No. 5101, Cayuga County, 2.03 miles: Hallock & Angle, Newburg, $23,320 for Residuum, $24,820 for Bermudez, and $24,820 for Trinidad; BRAYER BROS., Auburn, $22,667 (awarded contract on Residuum), $24,167, and $23,792; J. H. Weidman, Syracuse, $23,950, $25,825, and $25,825; John C. Healy, Auburn, $25,565, $26,690, and $26,315.

✚Horseheads-Catlin, County Highway No. 888, Chemung County, 3.72 miles: P. H. MURRAY, Rochester, $42,260 (awarded contract); T. H. Gill Co., Whitney Point, $46,-535.

✚Champlain-Mooers Forks, State Highway No. 5102, Clinton County, 6.52 miles; SPELLMAN-OLIVER CO., Chateaugay, $65,800 for Residuum (awarded contract on Residumm), $68,855 for Bermudez, and $67,844 for Trinidad; St. Regis Construction Co., Albany, $72,209, $75,209, and $75,209; Buckley Construction Co., Plattsburg, $71,460, $77,829, and $76,758; Brown & Lowe Co., Schenectady, $68,870, $73,000, and $72,000.

✚Fishkill Village, County Highway No. 895, Dutchess County, .89 miles: Mulderry Bros., Albany, $16,464 for Residuum, $16,848 for Bermudez, and $16,752 for Trinidad; Samuel Beskin, Fishkill, $15,600, $15,984, and $15,888; HALLOCK & ANGLE, Newburg, $15,489, $15,678, and $15,598 (awarded contract on Trinidad); Harper, Jova & Kehoe, Newburg, $17,800, $18,252, and $18,252; James E. Martin, Poughkeepsie, $16,584, $16,-984, and $16,900.

✚Johnstown-Broadalbin, County Highway No. 544, Fulton County, 5.77 miles: Daniel L. Mott, Utica, $65,690 for Residuum, $69,000 for Bermudez, and $69,000 for Trinidad; Flood & Van Wirt Co., Hudson Falls, $64,500, $67,125, and $67,875; Brown & Lowe Co., Schenectady, $62,880, $65,800, and $65,000; Olin T. Benedict, Pittsfield, Mass., $69,000, $72,000, and $71,000; Baker & Banker, Gloversville, $66,900, $69,900, and $69,800; Joseph Walker, New Paltz, $66,675, $69,705, and $68,947; James E. Martin, Poughkeepsie, $65,394, $68,884, and $68,154; S. B. VAN WAGENEN, Rondout, $55,000, $58,000 (awarded contract on Bermudez), and $58,-000; Buckley Construction Co., Plattsburg, $72,616, $78,420, and $78,000; Lane Construction Co., Meriden, Conn., $60,870, $63,-000, and $63,800.

✚Little Falls City, State Highway No. 5105, Herkimer County, 1.45 miles: Brown & Lowe Co., Schenectady, $23,675 on Residuum, $24,550 on Bermudez, and $24.250 on Trinidad; Kennedy Construction Co., Albany, $23,987, $24,573, and $24,573; JAMES E. MARTIN, Poughkeepsie, $21,994, $22,991 (awarded contract on Bermudez), and $22,-994; Newport Construction Co., Newport, $25,000, $25,800, and $25,700.

✚Garbutts Crossing, State Highway No. 5097, Monroe County, 1.06 miles: Wood & Tompkins, Hilton, $9,828 for Residuum, $10,-488 for Bermudez, and $10,323 for Trinidad; MONROE ROADS CO., Pittsford, $9,762 (awarded contract on Residuum), $10,724, and $10,559.

Yorkville Village, State Highway No. 5091, Oneida County, 1.06 miles: Henry P. Burgard Co., Buffalo, $35,527 for Bitulithic; Warren Bros. Co., Boston, Mass., $38,058 for Bithulithic; Kennedy Construction Co., Albany, $41,873 for brick; James E. Martin, Poughkeepsie, $45,400 for brick.

✚Wyatts-Hoffman, State Highway No. 5110, Schenectady County, 5.31 miles: Olin T. Benedict, Pittsfield, $49,997 for Residuum, $53,000 for Bermudez, and $53,000 for Trinidad; JOSEPH WALKER, New Paltz, $48,304 (R. O. W.), $51,228, and $50,497; Brown & Lowe Co., Schenectady, $48,565, $52,000, and $51,300; Buckley Construction Co., Plattsburg, $59,000, $63,428, and $62,436; Richard Hopkins, Troy, $55,180, $58,500, and $58,500.

Geneva-Waterloo, State Highway No. 5087, Seneca County, 5.91 miles: Frank L. Cohen, Buffalo, $71,990 for Residuum, $76,000 for Bermudez, and $76,000 for Trinidad; J. C. Stoll, Portville, $51,309, $54,967, and $54,052; Chambers & Truesdale, Buffalo, $70,298, $73,-956, and $73,041; Monroe [illegible]s Co., Pittsford, $73,625, $77,508, and [illegible] (held); Schroeder-Hicks Contracti[illegible], Rochester, $71,700, $75,300, and $74,40[illegible] [illegible]n F. Dolan Constructing Co., New Yo[illegible]ty, $77,400, $79,900, and $78,500; Fred[illegible] A. Brotsch, Jr., Rochester, $70,250, $76[illegible] [illegible]nd $73,7[illegible]; Niagara Construction Co., [illegible]g, $74,000, $77,500, and $76,500.

✚Seneca Falls Village, St[illegible] [illegible]ighway No. 5100, Seneca County, 3.41 [illegible] John F. Dolan Construction Co., New [illegible] City, $89,-975 for Residuum, $92,500 fo[illegible] [illegible]mudez, and $92,000 for Trinidad; Niaga[illegible] [illegible]onstruction Co., Corning, $86,000, $88,2[illegible] [illegible]d $88,000; Schroeder-Hicks Construction [illegible] Rochester, $84,000, $86,000, and $85,500 [illegible]tral City Paving Co., Syracuse, $84,0[illegible] [illegible].260, and $86,260; John E. Johnson C[illegible] [illegible]falo, $85,-990, $86,990, and $87,685; F[illegible] [illegible]RICK A. BROTSCH, JR., Rochester, $[illegible] (awarded contract on Residuum), $85,0[illegible] [illegible]d $84,000.

✚Big Creek, Parts 1 and 2, [illegible]ty Highway No. 906, Steuben Count[illegible] [illegible] miles; Schroeder-Hicks Contracting [illegible] Rochester, $74,000 for Residuum, $76,00[illegible] Bermudez, and $75,500 for Trinidad; [illegible] Murray, Rochester, $69,700, $73,775, $72,552; FREDERICK E. ELLIS, M[illegible] Mass., $67,077, $68,717 (R. O. W.), an[illegible] [illegible]8,717.

✚Big Creek, Part 4, High[illegible] No. 907, Steuben County, 4.13 miles: FR[illegible]ERICK E. ELLIS, Melrose, Mass., $45,491 [illegible] O. W.); John F. Dolan Contracting Co[illegible] New York City, $54,400.

✚Painted Post-Addison, Part [illegible] Highway No. 5094, Steuben County, 2.50 [illegible] North-western Construction Co., Frankl[illegible] Pa., $28,-522 for Residuum, $30,074 for B[illegible]udez, and $29,686 for Trinidad; John C. B[illegible]y, Corning, $26,178, $27,730, and $27,331 [illegible] H. Murray, Rochester, $25,685, $27,600, [illegible] $27,200; Greece Construction Co., Roches[illegible] $28,427, $30,000, and $30,000; Frederick E. Ellis, Melrose, Mass., $28,971, $29,747, an[illegible] $29,747; T. H. GILL CO., Whitney Po[illegible] $25,2[illegible] (R. O. W.), $26,792, and $26,7[illegible] Niagara Construction Co., Corning, $25,[illegible] $27,500, and $27,000.

Jerico Turnpike, Part 2, Road No. 5111, Suffolk County, 5.02 miles: Suffolk Contracting Co., Huntington, $47,000; Robert W. Smith, New York City, $37,938; H. J. Mullen, Jamaica, $34,500; Clancy & Van Alst, Astoria, $40,480.

Jerico Turnpike, Part 3, Road No. 5112, Suffolk County, 4.99 miles: H. J. Mullen, Jamaica, $46,168 for Residuum, $47,712 for Bermudez, and $47,712 for Trinidad; John J. Cashman, Brooklyn, N. Y., $54,000, $56,000, and $55,000; Clancy & Van Alst, Astoria, $50,980, $51,945, and $51,945.

✚Jerico Turnpike, Part 2, Road No. 5111-2, Suffolk County, 10.01 miles: H. J. MULLEN, Jamaica, $80,000 for Residuum, $81,500 for Bermudez (awarded contract on Bermudez), and $81,500 for Trinidad; Frank J. Gallagher, Brooklyn, N. Y., $90,000, $95,000, and $94,000; Clancy & Van Alst, Astoria, L. I., N. Y., $89,760, $90,760, and $90,760; Robert W. Smith, New York City, $92,333, $93,974, and $93,889.

✚Monticello-Mongaup Valley, Road No. 890, Sullivan County, 4.35 miles: E. W. Peck, Stratford, Conn., $47,685 for Residuum, $50,-000 for Bermudez, and $50,000 for Trinidad; Samuel Beskin, Fishkill, $49,990, $52,260, and $51,670; Avery-Smith & Co., Monticello, $57,000, $59,950, and $59,360; John E. Consalus, Albany, $47,485, $48,649, and $49,300; Suffolk Contracting Co., Huntington, $52,-500, $54,300, and $54,600; Harvey B. Sproul, Inc., Peekskill, $51,000, $52,000, and $53,000; DEGRAFF & HOGEBOOM, Kingston, $46,7[illegible] (awarded contract on Residuum, $49,100, and $49,100 for Trinidad; James E. Martin, Poughkeepsie, $56,200, $58,800, and $58,500; Frederick E. Ellis, Melrose, Mass., $52,295, $53,475, and $53,475.

✚Milton-Marlboro, Highway No. 5114, Ulster County, 3.82 miles: E. W. Peck, Stratford, Conn., $43,200 for Residuum, $45,200 for Bermudez, and $45,200 for Trinidad; Lane Construction Co., Meriden, Conn., $44,-900, $47,200, and $46,600; Hallock & Angle, Newburg, $41,379, $43,743, and $43,743; C. F. Jordan, Golden's Bridge, $40,632, $42,996 and $42,996; SAMUEL BESKIN, Fishkill, $39,400 (R. O. W.), $41,764, and $41,173; DeGraff & Hogeboom, Kingston, $43,600, $46,-000, and $46,000; Thomas G. Chase, Newburg, $42,000, $44,000, and $43,500; James E. Martin, Poughkeepsie, $41,948, $44,4[illegible]0, and $43,800; Suffolk Contracting Co., Huntington, $43,500, $45,300, and $45,600; Alonzo Schaupp, Albany, $47,000, $49,900, and $49,300; Harper, Jova & Kehoe, Newburg, $47,555, $49,919, and $42,328; Harvey B. Sproul, Inc., Peekskill, $42,000, $44,000, and $45,000; Joseph Walker, New Paltz, $43,308, $45,601, and $45,028.

✚Cambridge-Salem, Part 1, State Highway No. 5113, Washington County, 3.68 miles: Thomas H. Karr, Troy, $35,300 for Residuum, $37,500 for Bermudez, and $37,000 for Trinidad; A. A. Parker, Waterford, $37,750, $40,-700, and $40,700; W. A. BURNHAM & CO., Glens Falls, $34,000 (awarded contract on Residuum), $36,280, and $35,710.

✚Lyons-Sodus Point, County Highway No. 920, Wayne County, 3 miles: GREECE CONSTRUCTION CO., Rochester, $25,650 (awarded contract); Dale Engineering Co., Utica, $29,700.

✚Port Chester-Crystal Springs, Part 1, County Highway No. 901, Westchester County, 1.89 miles: James E. Martin, Poughkeepsie, $20,984 for Residuum, $22,374 for Bermudez, and $22,100 for Trinidad; Amos D. Bridges Sons, Hazardville, Conn., $20,393, $21,593, and $21,593; Michael Deheo & J. H. Slater, Port Chester, $30,533; Michael De Seco, Larchmont, $19,500, $20,800, and $20,-500; WHITE & COLLIGAN, Purchase, $19,-225 (awarded contract on Residuum), $20,-411, and $20,411; Daley & Merr[illegible], Port Chester, $21,800, $22,975, and $22,975; Suffolk Contracting Co., Huntington, $21,000, $21,900, and $22,000; Harvey B. Sproul, Peekskill, $21,000, $22,000, and $23,000; Frank E. Murray Contracting C[illegible], Port Chester, $20,910, $21,970, and $20,91[illegible] W. J. Watson, Yonkers, $29,800, $21,[illegible] and $21,100.

✚Java Center-Java Village, Coun[illegible] Highway No. 894, Wyoming County, 3.[illegible] miles: Frederick J. Mumm, Buffalo, $40,99[illegible] for Residuum, $42,900 for Bermudez, an[illegible] $42,500

for Trinid... Northwestern Construction Co., Franklin, ... $46,981, $47,016, and $47,333; FRANK F...E, Nunda, $40,828 (R. O. W.), $42,762, a... $42,762.

•Luzerne ...ke George, County Highway No. 805, W... County, 3.67 miles; Sherrill Hardware ... Co., Hudson Falls, $41,132 for Residuum ...,132 for Bermudez, and $42,632 for Trini... S. B. VAN WAGONEN, Rondout, $34... $36,779 (awarded contract on Bermudez) and $36,779.

ALBAN... N. Y.—Bids for the improvement of public ...ghways by State aid were received by the State Commission of Highways on May ...1911, as follows:

✚Parma ...orners-Spencerport, Spencerport-North C... County Highway No. 495, Monroe County, 6.15 miles: HUCKNALL CONTRACTI... CO., Albion, $51,200 for Residuum (a...ded contract), $55,000 for Bermudez and ...4,000 for Trinidad; Wood & Tompkins, Hilton, $51,460, $53,344 and $54,-173.

✚Pitts...-North Henriette, County Highway No. ...97, Monroe County, 2.67 miles: MONRO... ROADS CO., Pittsford, $16,000 (awarde... contract); James Stewart & Co., New Y... City, $18,000.

✚Hon... Falls-Pittsford Town Line, County Highway No. 502, Monroe County, 5.19 mil... MONROE ROADS CO., Pittsford, $52,705 for Residuum (awarded contract), $54,600 for Bermudez and $54,600 for Trinidad.

✚Rid... Rochester-Sea Breeze, County Highway No. 538, Monroe County, 5.67 miles: Frederi... A. Brotsch, Jr., Rochester, $79,-500 for Residuum, $81,300 for Bermudez, and $81,250 for Trinidad; Schroeder-Hicks Contracting Co., Rochester, $78,700, $81,000, and $80,400; Whitmore, Rauber & Vicinius, Rochester, $79,115, $81,919, and $81,343; JULIUS FREIDERICH CO., Rochester, $76,-100, $78,100, and $77,900 (awarded contract on Trinidad); Thomas Holahan, Rochester, $78,000, $80,304, and $79,728.

✚Sea Breeze-Nine Mile Point, Road No. 573, Monroe County, 6.38 miles: Fred. A. Brotsch, Jr., Rochester, $63,500 for Residuum, $65,400 for Bermudez, and $65,300 for Trinidad; A. J. ROCKWOOD, Rochester, $62,190 (awarded contract on Residuum), $65,680, and $65,680; Schroeder-Hicks Contracting Co., Rochester, $62,999, $66,500, and $65,700; Julius Friedrichs Co., Rochester, $62,800, $66,300 and $64,400.

✚Oak Orchard-Section 3, Road No. 394, Orleans County, 3.24 miles: HUCKNALL CONTRACTING CO., Albion, $24,300 for Residuum (awarded contract), $26,000, and $25,600; Schroeder-Hicks Contracting Co., Rochester, $26,000, $27,800 and $27,300; Roder & Tyler, Albion, $24,386, $26,128, and $25,693.

✚Medina-Alabama, Road No. 395, Orleans County, 5.40 miles: John F. Dolan Contracting Co., New York City, $49,000 for Residuum, $33,700 for Bermudez, and $33,700 for Trinidad; RHODY & TYLER, Albion, $45,-000 (awarded contract on Residuum), $48,-300, and $47,500; Hucknall Contracting Co., Albion, $45,800, $48,950, and $48,200.

✚Holley-Albion, Part 2, State Highway No. 5118, Orleans County, 2.24 miles: HUCKNALL CONSTRUCTION CO., Albion, $20,-646 for Residuum, $22,634 for Bermudez (awarded contract on Bermudez), and $21,-687.

Lockport Tonawanda Creek Highway No. 749, Niagara County, 10.30 miles: No bids received.

✚Adams, Watertown, Part 3, State Highway 5119, Jefferson County, 3.24 miles: A. J. Rockwood, Rochester, $31,700 for Residuum, $33,700 for Bermudex, and $33,700 for Trinidad; BURNS BROTHERS & HALEY, Watertown, $30,978 (awarded contract on Residuum), $33,200 and $33,200.

✚Fayetteville-Chittenango, Part 2, State Highway No. 5120, Madison County, 3.31 miles: Aetna Engineering & Contracting Co., Herkimer, $38,000 for Residuum, $40,100 for Bermudez and $40,000 for Trinidad; ; Central City Paving Co., Syracuse, $38,999 Residuum, $41,102 Bermudez and $41,102 Trinidad; J. H. WEIDMAN, Syracuse, $35,-100 (awarded contract on Residuum, $37,700 Bermudez and $37,700 Trinidad; Newport Construction Co., Newport, $36,265 Residuum, $38,905 Bermudez and $37,352 Trinidad.

✚North Norwich-Sherburne, State Highway No. 5121, Chenango County, 6.88 miles; Newport Construction Co., Newport, $68,800 for Residuum, $72,292 for Bermudez and $70,800 for Trinidad; Daniel L. Mott, Utica, $71,190 Residuum, $75,500 Bermudez and $75,-500 Trinidad; John F. Dolan Contracting Co., New York City, $72,000 Residuum, $74,500 Bermudez and $73,500 Trinidad; THOS. F. SHAUGHNESSY & CO., Albany, $65,400 (awarded contract on Residuum), $70,000 Bermudez and $69,000 Trinidad.

✚North Brookfield-Waterville, County Highway No. 840, Oneida County, 4.37 miles: Wayne Construction Co., Newark, $61,000 for Residuum, $64,369 for Bermudez and $64,369 for Trinidad; Thos. C. McDermott, Utica, $61,026 Residuum, $63,721 Bermudez and $63,048 Trinidad; John F. Dolan Contracting Co., New York, N. Y., $64,000 Residuum, $65,800 Bermudez and $65,000 Trinidad; Newport Construction Co., Newport, $60,980 Residuum, $63,900 Bermudez and $63,000 Trinidad; THOS. F. SHAUGHNESSY & CO., Albany, $56,400 (awarded contract on Residuum), $60,000 Bermudez and $60,000 Trinidad; Joseph Walker, New Paltz, $59,985 Residuum, $62,680 Bermudez and $62,006 Trinidad.

✚Ithaca-Danby, Part 2, State Highway No. 5122, Tompkins County, 3.24 miles: THOS. F. SHAUGHNESSY & CO., Albany, $36,400 for Residuum (awarded contract), $40,000 for Bermudez and $39,000 for Trinidad; John F. Dolan Contracting Co., New York City, $39,... Residuum, $42,200 Bermudez and $41,... Trinidad; Schroeder Hicks Contracting Co., Rochester, $38,000 Residuum, $40,500 Bermudez and $40,000 Trinidad; Patrick D. Connelly, Ithaca, $37,512 Residuum, $39,552 Bermudez and $39,042 Trinidad.

✚...lliston-Pallatine Bridge, State Highway No. 5123, Montgomery County, 4.06 miles: John E. Consolus, Albany, $41,648 for Residuum, $43,348 for Bermudez and $44,...0 for Trinidad; Brown & Lowe Co., Schenectady, $43,470 Residuum, $46,000 Bermudezand $45,400 Trinidad; James E. Martin, Poughkeepsie, $43,999 Residuum, $46,800 Bermudez and $46,200 Trinidad; OLIN T. BENEDICT, Pittsfield, Mass., $41,000 (awarded contract on Residuum), $43,000 Bermudez and $43,000 Trinidad; Thos. H. Karr, Troy, $41,000 Residuum, $44,000 Bermudez and $43,500 Trinidad; Jos. Walker, New Paltz, $42,874 Residuum, $45,427 Bermudez and $44,788 Trinidad; D. I. Snell & Co., Canajoharie, $42,501 Residuum, $45,139 Bermudez and $44,481 Trinidad.

Palatine Bridge-Fonda, Part 1, State Highway No. 5124, Montgomery County, 4.25 miles: Hallock & Angle, Newburg, $50,998 for Residuum, $53,639 for Bermudez, and $53,539 for Trinidad; Joseph Walker, New Paltz, $50,755, $53,290, and $52,656; Olin T. Benedict, Pittsfield, $48,900, $52,000, and $51,500; James E. Martin, Poughkeepsie, $51,-825, $54,489, and $54,400; Sherrill Hardware & Plumbing Co., Hudson Falls, $49,570, $51,770, and $51,770; Baker & Banker Gloversville, $55,600, $58,200, and $58,000.

Palatine Bridge-Fonda, Part 2, State Highway No. 5125, Montgomery County, 4 miles: Baker & Banker, Gloversville, $45,900 for Residuum, $48,400 for Bermudez, and $48,-000 for Trinidad; James E. Martin, Poughkeepsie, $46,900, $49,390, and $48,770; Olin T. Benedict, Pittsfield, Mass., $42,900, $45,-000, and $45,000; Joseph Walker, New Paltz, $44,100, $46,430, and $45,947; Richard Hopkins, Troy, $46,380, $49,000, and $49,000; Brown & Lowe Co., Schenectady, $42,860, $45,500, and $45,000.

✚Highways Nos. 5124, 5125, Combined, Montgomery County, 8.25 miles: Brown & Lowe Co., Schenectady, $92,500 for Residuum, $97,500 for Bermudez, and $95,900 for Trinidad; Joseph Walker, New Paltz, $93,-355, $98,220, and $97,120; Olin T. Benedict, Pittsfield, $91,000, $96,000, and $96,000; JAMES E. MARTIN, Poughkeepsie, $88,983 (awarded contract on Residuum), $95,000, and $95,000.

Hoffman-Cranesville, State Highway No. 5126, Montgomery County, 2.24 miles: Brown & Lowe Co., Schenectady, $27,800 for Residuum, $29,200 for Bermudez, and $29,000 for Trinidad; Krow & Walch, Pittsfield, Mass., $26,747, $28,048, and $27,727; Alonzo Schaupp, Albany, $25,900, $27,600, and $27,-250; Dale Engineering Co., Utica, $33,380, $35,000, and $35,000; THOMAS KARR, Troy, $25,470 (awarded contract on Residuum), $26,800, and $26,600; Joseph Walker, New Paltz, $27,390, $28,723, and $28,390; Delaware Construction Co., Sidney, $27,490, $29,-490, and $29,000; Vedder & Dugan, Amsterdam, $27,464, $28,854, and $28,506; James E. Martin, Poughkeepsie, $31,395, $33,000, and $33,000.

✚Union Hill-Ontario Center, State Highway No. 5127, Wayne County, 3.48 miles: J. W. Lewis Construction Co., Rochester, $28,044 for Residuum, $29,940 for Bermudez, and $29,466 for Trinidad; P. H. Murray, Rochester, $20,475, $31,371, and $30,897; Wood & Tompkins, Hilton, $29,900, $31,796, and $31,322; Schroeder-Hicks Construction Co., Rochester, $29,999, $31,900, and $31,-400; CHAMBERS & TRUESDALE, Rochester, $27,999 (awarded contract on Residuum), $30,000, and $29,560.

Otto-Cattaraugus, County Highway No. 695, Cattaraugus County (reconstruction), 1.21 miles: James Stewart & Co., New York City, $8,667.

Otto-East Otto, County Highway No. 697, Cattaraugus County (reconstruction), 2.27 miles: James Stewart & Co., New York City, $25,000.

NEW YORK, N. Y.—Bids will be received by Charles S. Stover, Pres. of the Park Bd., at the office of the Department of Parks, until 3 p. m., May 11, for furnishing all the labor and materials for reconstructing and surfacing with asphaltic earth mixture, the Bronx and Pelham Parkway, from the Southern Boulevard to the Butler St. Road, in the Borough of the Bronx, New York.

Bids will be received by George Cromwell, Pres. Boro. Richmond, until noon, May 9, for regulating and repaving with vitrified brick pavement on concrete foundation in the gutters, and with bituminous macadam pavement in the roadway, McKeon St., from Quinn to Gordon Sts.

Bids will be received by George McAneny, Pres. Boro. Manhattan, until 2 p. m., May 10, for paving, grading and curbing various streets.

Bids will be received by Alfred E. Steers, Pres. Boro. Brooklyn, until 11 a. m., May 10, for paving, grading, regulating and curbing portions of various streets.

✚•WEST NEW YORK, N. J.—We are officially advised that contract for furnishing all material and labor required for grading and constructing streets and sidewalks upon the property of the West New York Improvement Co., in the Town of West New York, was awarded on April 19 to JOSEPH MURPHY & SON, INC., 308 Charles St., West Hoboken, N. J., at $65,000. Noted on April 6.

✚NEWARK, N. J.—We are officially advised that contracts for paving were awarded on April 26, as follows: South 13th St., with bitulithic, to the STANDARD BITULITHIC CO., at $5,046; Avenue A, with granite, to the JERSEY PAVING CORP., at $12,560; Branford St., with brick, to the JERSEY PAVING CORP., at $8,050.

BOGOTA, (Hackensack post-office), N. J.—Bids will be received by Harlan P. Ross, Boro. Clk., until May 9, for paving Elm and Larch Aves. The work will consist of 5,065 sq. yds. of 4-in. macadam pavement. Plans, etc., may be obtained at the residence of Henry Wehrmaker, Queen Anne Road.

✚NEWARK, N. J.—Contracts were awarded on April 27 as follows: South 13th St., from Avon to Madison Aves, with bitulithic, to the STANDARD BITULITHIC CO., at $5,-466; Avenue A, from Emmet to Poinier Sts., $12,561, and Branford St., from Elizabeth to Frelinghuysen Aves., at $8,050, to the JERSEY PAVING CO.; for grading, curbing and flagging Woodside Ave., from Elwood to Delavan Aves., at $3,591 to PHILIP and PETER JANNARONE; for grading, curbing and flagging Mead St., from Silver to Ocean Aves., at $2,087 and Avenue C, from Emmet to Vanderpool Sts., at $2,621, to MAHER McNICHOLAS. Noted on April 20.

NEWARK, N. J.—Bids will be received by the Board of Street and Water Commissioners until 3.15 p. m., May 4, for paving the following streets and highways: Brenner St., from South Tenth to Rose Sts.; Grafton Ave., from Summer to Mount Prospect Aves., Kent St., from Eighteenth Ave. to Skinkie St.; Skinkle St., from South Tenth to Kent Sts.; Whitney St., from South Orange to Dassing Aves.; Winthrop St., from Summer to Lincoln Aves.

•MEADVILLE, PA.—Bids will be received by the Council of the City of Meadville until 8 p. m., May 10, for grading, paving and curbing Center St. Plans and specifications may be obtained at the office of the City Engineer. Fred C. Kribort is City Clk.

PHILADELPHIA, PA.—Bids will be received by John W. Davis, Secy. Highway Com., until 8 p. m., May 5, for paving with macadam and telford, and laying sidewalks in the Borough of Lansdowne for the years 1911 and 1912.

WILKINSBURG, PA.—Bids will be received by Frease & Sperling, Boro. Engrs., Wilkinsburg, until 2 p. m., May 6, for grading, curbing and paving the following streets with Hillside block paving brick: Franklin Ave., from Johnston St. to Johnston Plan, 3,012 sq. yds.; Midland St., from Penn to Franklin Aves., 1,666 sq. yds.; Woodland Ave., from Midland St. to Johnston Plan, 2,022 sq. yds. Plans and specifications can be seen at the office of the Borough Engineers.

•ALTOONA, PA.—Bids will be received by the Board of Public Works, W. M. C. Craine, Pres., until 3 p. m., May 12, for paving various streets, approximately 85,000 sq. yds., of sheet asphalt, asphalt block, and brick paving.

✚McKEES ROCKS, PA.—We are officially advised that bids were received on May 1, for paving and curbing, as follows: Thomas Cronin & Co., $24,920; James Topley & Co., $22,845; M. O. Herron & Co., $21,103; Frank Bryan, $20,778. The contract was awarded in two parts: to FRANK BRYAN, at $9,-696; and to M. O'HERRON & CO., at $10,-505. Noted on April 27.

BALTIMORE, MD.—Bids will be received by the State Roads Commission, John M. Tucker, Chn., Union Trust Bldg., Baltimore, Md., until noon, May 10, for the construction of 57.1 miles of roadway and one concrete bridge, as follows: Anne Arundel County—One section along Light St., Brooklyn, .31 miles, vitrified brick; one section, from Mount Zion to Birdsville, five miles, grading, draining and bridging only, and three sections along Annapolis Boulevard, viz., from end of section one to Revell, 1.82 miles, stone macadam; from Boone to Magothy River, 3.07 miles, stone macadam; from Magothy River to Glen Burnie, 5.27 miles, pitch macadam. Baltimore County—State Road No. 1, Section 13, from Patapsco River to Baltimore & Ohio R. R. crossing, near Halethorpe, stone macadam, .8 miles; State Road No. 1, Section 15AB2, from Baltimore & Ohio R. R. crossing, near Mt. Winans, to Caton Ave., stone macadam, 1.57 miles. Calvert County—One section, 4.26 miles, along road between Owings and Prince Frederick, grading, draining and bridging only. Carroll County—One section, 5.29 miles, along road betwen Gamber and Fenby, stone macadam. Charles County—One section, 3.01 miles along road from Waldorf to St. Mary's county line, gravel. Dorchester County—One section, 4.39 miles, along road from Shiloh to Brookview, stone macadam. Frederick County—One section, along Monrovia to Kemptown Road, 1.20 miles, stone macadam; one section from New Market to New London, three miles, stone macadam. Garrett County—One section between McHenry and Accident, 4.39 miles, stone macadam; one section, from Alleghany county line to Piney Grove, 4.18 miles, pitch macadam. Montgomery County—Concrete bridge over Rock Creek. Prince George County—One section, from District of Columbia line to Charles county line, six miles, gravel; two sections along State Road No. 1, Section 10, near Paint Branch, .36 miles, stone macadam; Section 14B, through Bladensburg, .47 miles, stone macadam. Queen Anne's County—One section, from Centerville to Wye Mills, 2.5 miles, stone macadam; one section at Wye Mills, .22 miles, stone macadam. Bids are to be made upon blank form contained in book of specifications, which will be furnished by commission upon application and payment of $2 for each section; blueprints of each section furnished at rate of 25 cts. for each half mile.

✚FAIRMONT, W. VA.—The contract for paving West Milford Pike for a distance of a mile has been awarded to W. T. GATES & CO., Flemington, at $8,230. The other bidders were: H. C. Brooks Co., $9,340; Enterprise Construction Co., $10,198; Hornor Co., $11,441; Osborne Co., $10,201; Tony Pietro, $11,289.

GRAHAM, N. C.—Bids will be received until May 10 for improving 2½ miles of streets. N. C. Hughes, Jr., Engr. and A. L. Holt, Secy. St. Comn.

CLEVELAND, OHIO.—Bids will be received by the Commissioners of Cuyahoga County, John F. Goldenbogen, Clk., until 11 a. m., May 20, for grading, draining and improving the unfinished portion of Settlement Road, from Lorain Road in Rockport Village, to Wooster Pike, in West Park, Parma and Middleburg Townships, in accordance with the form of contract and specifications to be furnished by Frank R. Lander, County Surveyor.

NEW PHILADELPHIA, OHIO.—Bids will be received by the City Clerk, until May 22 for paving the new Cumberland Road with brick.

AKRON, OHIO.—Bids will be received by the Board of Control until noon, May 5, for paving and constructing sidewalks on various streets. John W. Gauthier is Dir. Pub. Serv.

BOWLING GREEN, OHIO.—Bids will be received by F. W. Toan, County Audr., until 1 p. m., May 23, for grading, draining and macadamizing the road petitioned for by A. L. Thompson.

BOWLING GREEN, OHIO.—Bids will be received by the Fort Meigs Memorial Commissioners until May 13 for the construction of a tar macadam road from the public highway around the Fort Meigs monument.

✚BOWLING GREEN, OHIO.—We are officially advised that the contract for constructing a road two miles long between Henry and Wood Counties, was awarded on April 21 to GOETSCHINS STONE CO., the only bidder, at $11,214. Noted April 6.

✚CINCINNATI, OHIO.—A contract has been awarded to WARREN BROS., at $2.30 per sq. yd. for completing the paving of Clifton Ave., an approximate area of 5,000 sq. yds.

✚COLUMBUS, OHIO.—Contracts for paving have been awarded as follows: Barthman Ave., from High St. to Parsons Ave., to WILLIAM M. GRAHAM, at $21,684, for brick; Beech St., from Forest to Schiller St., to S. T. KNIGHT, at $9,325, for brick; Columbus St., from Parsons Ave. to Front St., to S. T. KNIGHT, at $25,603, for brick; Pendleton Ave., from Raynard St. to Livingston Ave., to JOHN C. BEASLEY, at $6,-903, for brick; Reeb Ave., from High to Seventh Sts., to WM. M. GRAHAM, at $12,-404, for brick; Stone Ave., from Nicholas to 18th Sts., to JOHN C. BEASLEY, at $7,788, for brick; Town St., from Hawkes to Central Aves., to D. E. SULLIVAN & SONS, at $14,932, for brick.

COSHOCTON, OHIO.—Bids will be received by F. E. Mowery, Audr. of Coshocton County, until May 11, for the improvement of a part of the Coshocton and Dresden road west of the Muskingum River.

FINDLAY, OHIO.—Bids will be received by the Commissioners of Hancock County until noon, May 5, for constructing four miles of stone pike. Jefferson Roller, Lewis Brickman and J. W. Montgomery are Comrs.

SIDNEY, OHIO.—We are officially advised that the Cincinnati, Hamilton & Dayton Ry. Co. will soon receive bids for 17,000 cu. yds. of team grading and incidental work on changes of public highways, made necessary by the revision of grade and line near Sidney. Particulars can be obtained from F. H. Alfred, Cincinnati, Ohio, Gen. Supt., or from A. B. Ziegweid, Sidney, Res. Engr.

✚SPRINGFIELD, OHIO.—The contract for paving and curbing East Washington St., between Limestone and Spring Sts., has been awarded to W. F. PAYNE, at approximately $8,500. The work will be done for the Cleveland, Cincinnati, Chicago & St. Louis Ry.

FORT WAYNE, IND.—Bids will be received by Calvin H. Brown, County Audr., until 10 a. m., May 9, for furnishing crushed gravel for roads in Allen County.

MONTICELLO, IND.—Bids will be received by the Commissioners of White and of Carroll Counties until noon, June 7, for the construction of a rock road on the county line. A. G. Fisher is County Audr.

BLOOMINGTON, IND.—Bids will be received by Wm. B. Smith, City Clk., until 7.30 p. m., May 8, for the improvement of North Lincoln St., from Cottage Grove Ave. to Twelfth St., by grading, draining, macadamizing, constructing combined concrete curb and gutters, cement sidewalks and brick crossings according to the plans and specifications adopted and now on file in the office of the City Clerk.

INDIANAPOLIS, IND.—The board of public works will receive bids until 10 a. m., May 15, for the improvement of various streets, by grading and paving.

HARLAN, IOWA.—Bids will be received until May 15 for constructing 15,000 sq. yds. of concrete pavement, estimated at $30,000. O. F. Graves is City Clk.

DULUTH, MINN.—Bids will be received by the Board of Public Works until 10 a. m., May 5, for grading and paving Junita St., from Fifty-fourth Ave. to Sixtieth Ave., East, according to plans and specifications on file in the office of the Board. Olof G. Olson is Pres. and R. Murchison, Clk. of Bd.

PIERRE, S. DAK.—Bids will be received by the State Capitol Commission until 3 p. m., May 19, for grading, laying water pipes and lighting conduits, building retaining wall, constructing cement walks, and paving driveways on State Capitol Grounds at Pierre, in accordance with plans and specifications prepared by Samuel H. Lea, State Engr. Plans and specifications may be seen at the office of the State Engineer, Pierre, and copies of plans and specifications may be obtained on application to the State Engineer on payment of the cost of duplication. Gov. R. S. Vessey is Chn. and H. B. Anderson is Secy. of Comn.

GEORGETOWN, TEX.—We are officially informed that bids will be received until 3.30 p. m., June 1, for constructing gravel and macadam roads, estimated at $100,000. W. W. Jenkins is Audr. of Williamson County.

BRADY, TEX.—We are officially advised that District No. 1, of McCullough County, has voted $75,000 of road bonds, and will begin work on this as soon as an engineer can make up specifications and bids be advertised. This district is 20 miles long and 10 miles wide.

OKLAHOMA CITY, OKLA.—Bids will be received by Bob Parmon, City Clk., until 5 p. m., May 8, for grading various streets.

LEWISTON, IDAHO.—Bids will be received by the City Clerk of Lewiston until 8 p. m., May 10, for the following work: 69,500 cu. yds. of excavation, rolling the roadway, 16,-300 lin. ft. of field stone gutters, 59,350 lin. ft. of concrete curbs, 1,940 lin. ft. of 8-in. steel or concrete drainage pipe, 108 concrete ends for drainage pipe.

SALT LAKE CITY, UTAH.—We are officially advised that bids for paving and grading in Paving Extension No. 64, were received on April 21 as follows: P. J. Moran, $44,573; Strang & Maguire, $44,719. G. F. McGonagle is City Engr. and H. G. McMillan, Chn. Bd. Pub. Wks.

PHOENIX, ARIZ.—Bids will be received until May 20 by the Board of Control of Arizona for the construction of the territorial road from Tucson to Bisbee. Robt. W. Craig is Secy.

BELLINGHAM, WASH.—Bids will soon be asked for constructing concrete sidewalks on Grant St., at an estimated cost of $7,000.

SOUTH BEND, WASH.—Resolutions have been passed to pave several streets at an estimated cost of $120,645.

FULLERTON, CAL.—D. S. Halladay, Consult. Engr., Central Bldg., Los Angeles, has prepared plans and estimates for 13 miles of oil macadam roadway, to cost $178,000, contemplated by the city.

LOS ANGELES, CAL.—Bids will be received until May 8 by the Board of Supervisors of Los Angeles County for the improvement of portions of Manhattan Beach Boulevard.

LOS ANGELES, CAL.—Bids for improving Harbor Boulevard and Palm Ave., have been received by the Supervisors of Los Angeles County as follows: Barber Asphalt Paving Co., Section 1, $95,854; Section 2, $48,612; Section 3, $81,369. Bryant & Austin, Inc., Section 1, $77,560; Section 2, $40,508; Section 3, $64,958. A. S. Bent & George Pennybaker, Section 2, $27,694; Section 3, $43,252; Section 4, $3,505.

✚LOS ANGELES, CAL.—Contracts were awarded by the Board of Public Works on April 16 as follows: For improving Bonnie Brae St., from First St. to Ocean View Ave., to the BARBER ASPHALT PAVING CO., at $12,786; for improving 16 streets between Figueroa St., to BENJAMIN E. FORD, at $11,142; Micheltoreno St., between Sunset Boulevard and Effie St., to WALTER OVERELL, at $11,335; Sunset Boulevard, between Marion Ave. and city line, to CHAS. H. MATTERN, at $16,500; Flower St., from Temple to Third Sts., to the BARBER ASPHALT PAVING CO., at $34,377; Crenshaw Boulevard, between Pico and Washington Sts., to FAIRCHILD, GILMORE WILTON CO., at $24,522; 16th St., between Figuera St. and Pacific Ave., to BARBER ASPHALT PAVING CO., at $53,479; Ave. 18, between Albion St. and Baravia St., to O. A. THOMAS, at $6,785.

LODI, CAL.—Bids will be received by the City Clerk until May 15 for paving various streets with macadam. The estimated cost of the work is $42,430.

✚BRANTFORD, ONT.—The contract for laying a vitrified block pavement with cement base between and on each side of the street car rails has been awarded to P. H. SECORD & SONS, Brantford, Ont. at $2.24 per sq. yd.

BRANDON, MAN.—Bids will be received by the City Clerk for paving portions of Eighth, Ninth, Tenth and other streets. Bids will be received on wood block, asphalt block, sheet asphalt, granitoid, bitulithic and vitrified brick on 5 or 6-in. concrete foundations. R. E. Speakman is City Engr.

MANUFACTURING PLANTS.

(✚Denotes a contract awarded.)

AUGUSTA, ME.—The Lamb Mfg. & Cotton Cleaner Corporation, Augusta, has been incorporated under Maine laws with a capital of $500,000 for the purpose of owning and operating cotton and woolen mills. E. M. Leavitt, of this city, is Pres. and Treas.

✚CHICOPEE, MASS.—The contract for the proposed cotton mill, to be erected by the Dwight Mfg. Co., was awarded recently to CASPER RANGER, of Holyoke. The building will be of mill construction, 440 × 130 ft., and will be six stories in height. The cost will be about $380,000. The contractor will begin work on the construction of the building at once.

✚HOLYOKE, MASS.—CASPER RANGER, of Holyoke, has been awarded the general contract for the proposed mill of the Goetz Silk Mfg. Co. on Jackson St. The building will be of brick, 50 × 250 ft., mill construction, three stories high with brown stone trim. Noted last week.

✚NIANTIC, R. I.—The general contract for the erection of the factory building for the Bradford Dyers Association, Ltd., of London, England, has been awarded to the R. A. SHERMAN & SONS CO., of Westerly, R. I. The structure will be one story high, 290 × 380 ft., of brick and reinforced concrete. The plans were drawn by R. P. Jenks, Banigan Bldg., Providence. Noted last week.

PROVIDENCE, R. I.—According to reports, the American Optical Co., which now has a factory at Southbridge, Mass., is soon to erect a branch plant in this city.

✚WILLIMANTIC, CONN.—The Willimantic Industrial Co. has awarded the contract for the electrical equipment of its factory to MAURICE PALMER, of this city. There were four bidders on the work.

BREWSTER, N. Y.—Press reports state that the New York Blaugas Co. has purchased a tract of land here and will immediately erect two factory buildings, 40 × 100 ft. each. E. C. Benedict and Elbert A. Gay, of New York, are Directors of the Company.

✚ALBANY, N. Y.—LEAHEY & SHUFELT have been awarded a contract for an extensive addition to Huyck Mills, at Albany, the work to be started soon. The building will be 110 × 88 ft. and three stories high. It will be annexed to the main building on the south, and will extend almost to the Memorial Park line, according to reports.

✚NEW YORK, N. Y.—The contract to furnish 2,200 tons of structural steel for the proposed factory at the northwest corner of Spring and Hudson Sts., owned by Henry Heide, has been awarded to POST & McCORD, 44 East 23d St. Noted on April 6.

Plans have been filed by F. C. Zobel, Arch., 118 East 28th St., for the construction of a 12-story factory and stores, 74.1 × 90 ft., to be erected by the East Thirtieth Street Co. on the north side of 29th St., 319.4 ft. west of Sixth Ave. Estimated cost, $300,000.

Loton Horton, Pres. of Sheffield Farms, Slawson, Decker Co., has bought a Brooklyn site for a dairy and stable. It fronts 187 ft. on Fulton St., between New York and Brooklyn Aves., and extends 200 ft. to Herkimer St., where the plot has a frontage of 107 ft. The projected 4-story structure, with equipment, will cost $500,000. Plans are being drawn by Frank A. Rooke, 489 Fifth Ave., New York.

The Terry & Tench Co., Lexington Ave. and 13th St., plans to erect an 8-story fireproof factory on the west side of Park Ave., between 122d and 123d Sts. The plot is 200 × 80 ft.

HALL (Halls Corners post-office), N. Y.—It is announced that Libby, McNeal & Libby, of Chicago, will erect an extensive sauerkraut factory here, to cost $20,000.

YONKERS, N. Y.—The Associated Motion Picture Patents Co. has been negotiating with Ralph Warren, Secy. of the Chamber of Commerce, in regard to building its proposed $250,000 factory here. William H. Stone is Pres. of the company and Richard G. Hollman, Vice-Pres.

NEWARK, N. J.—For the erection of a factory the Terwilliger-Stone Leather Co., 210 New Jersey Railroad Ave., has bought a plot of ground on the north side of Emmet St., between Mulberry and Goble, and will begin construction soon. It will be of brick, two stories high, and of ground dimensions, 30x100 ft.

CONNELLSVILLE, PA.—Bids are being received by the Keystone Tube Works for the construction of an addition to its plant, and the contract will be awarded May 5. I. W. Bollinger is Pres.

ERIE, PA.—The Skinner Engine Co. is preparing to build an extensive foundry, the present accommodations for its molders having been found inadequate. The proposed building will be two stories, and will be built of brick, in the rear of the office building, at the plant of the company, at the southeast corner of Twelfth and Chestnut Sts. Cost, $16,000.

ETNA (Allegheny post-office), PA.—The contract for the erection of the buildings for Spang, Chalfant & Co., at Etna, was recently awarded to the B. A. GROAH CO., of Pittsburg. The buildings were designed by Irvin & Witherow, Engrs., and are to be of fireproof construction, concrete and structural steel being used throughout. The improvements will include an office building, three stories high, 60 × 100 ft., a socket tapping shop, two stories high, 100 × 100 ft., and a machine shop, 100 × 100 ft. Work upon the new buildings will start at once and will be rushed to completion as rapidly as possible. A large force of workmen will be employed. Noted on March 30.

✚BRIDGEVILLE, PA.—The Standard Steel Box Co., of Bridgeville, recently let a contract to the CUTHBERT BROS. CO., of Pittsburg, for the erection of a 1-story factory building at Bridgeville. The building will cost $12,000.

PHILADELPHIA, PA.—The Class & Nachod Brewing Co., which has been located at 1728 North Mervine St., will erect a brewery at Tenth and Montgomery Aves., at a cost of $500,000. There will be nine buildings in the proposed plant and all will be of the most modern construction and equipment.

A. H. & F. H. Lippincott, Inc., are about to build an extensive addition to the marble mill at the northwest corner of 24th and Locust Sts., which they have just purchased from the David Bair estate. The lot has a frontage of 246 ft. on 24th St., with a depth to the Schuylkill River of 570 ft., allowing for the construction of wharf facilities. The addition will be at least four stories in height, covering a large part of the lot.

Plans are being prepared for another factory for the Lanston Monotype Co. to be built on a lot at the southwest corner of 24th and Locust Sts., which was recently sold to Adrian Larkin. According to reports, extensions will be made to the present plant at a cost of $65,000. The estimated cost of the new building is $200,000.

PITTSBURG, PA.—The plant of the Union Steel Castings Co. at 61st and Butler Sts., is to be enlarged to double the capacity of the present works. The stockholders recently authorized an increase to the capital stock of the company of $1,000,000, and it is from the sale of this stock that the funds will be secured to make the improvements, according to press reports.

✚BALTIMORE, MD.—JOHN S. BUSICK has been awarded the contract for the erection of a storage building for the Baltimore & Ohio R. R. on the south side of McHenry St. near Franklin St. It will cost about $10,000. The structure will be of brick and frame with slag roof and concrete foundations. It will be $2\frac{1}{2}$ stories high and 50 × 60 ft. It will be used for the storage of hay, grain and feed.

RICHMOND, VA.—A. Hoen & Co., 1109 Bank St., will rebuild the printing, lithographing and engraving plant, recently burned at a loss of about $150,000.

CLARKSBURG, W. VA.—Negotiations have been closed here for the removal of the factory owned by the Mountain Window Glass Go., from Coudersport, Pa., to this city, and work will begin soon. It is the intention to establish a 48-blower tank here.

REYNOLDS, GA.—It is understood that plans are on foot for the organization of a company to build a cotton factory at Reynolds and J. H. Neisler, Secy. of the Chamber of Commerce, is promoting the enterprise.

✚SILURIA, ALA.—The organization of the Buck Creek Cotton Mills with a capital stock of $600,000 as a reorganization of the Siluria Cotton Mills Co., of Siluria, will be followed by extensive enlargements and improvements to the plant at Siluria. T. C. Thompson, of Birmingham, Ala., has been elected Pres. of the new company and his contracting firm, T. C. THOMPSON & BROS., of Birmingham and Charlotte, N. C., has the contract for erecting the additional Buck Creek buildings. J. W. Cannon, of Concord, N. C., mill owner and manager, is also interested and will have the management of the Buck Creek plant. The additions are estimated to cost about $250,000 and work will be begun at once. Noted last week.

✚LAUREL, MISS.—The Wausau Southern Lumber Co., of Arbor Vitae, Wis., plans to erect a plant at Laurel. It will have a capacity of 200,000 ft. of lumber every 10 hours for cutting the timber from over 70,000 acres of long-leaf pine lands which the company owns and will develop. The first mill will include two 14-in. × 9-ft. single cutting band mills, gang saw, heavy 12-in. horizontal resaw, and all necessary machinery. The mill and entire plant will be of steel and concrete fireproof construction, and contract for erecting the plant has been awarded to the D. J. MURPHY MFG. CO., of Wausau, Wis. The Wausau Southern Lumber Co. is capitalized at $1,500,000, and W. H. Bissell, of Wausau, is Pres. and will have the active management of the company's business in Mississippi.

MEMPHIS, TENN.—A site has been selected here for a plant to be built by the Odee Gas Engine Co., now operating a plant at Beloit, Wis., which will be abandoned, it is reported.

FRANKFORT, KY.—Reports from Frankfort, state that plans are on foot for the erection of a cotton factory in that city and C. P. Chenault is mentioned in connection with the proposition. It has been learned that he is investigating cotton mill machinery with a view of obtaining estimates on the necessary equipment for a plant.

ALLIANCE, OHIO.—An additional plant is to be built here by the American Steel Foundries Co. on land recently purchased near the present plant.

CINCINNATI, OHIO.—The Kelley-Koett Co., of Covington, manufacturers of X-ray machines, will erect a brick factory on Fourth St.

✚CLEVELAND, OHIO.—The contract for the erection of a building for the Cleveland Foundry Co. on Platt Ave., to cost $140,000, has been awarded to ANDREW DALL & SON, 121 Lakeside Ave.

IRONTON, OHIO.—The Olive Machine Co. has decided to make extensive improvements to its plant to cost $50,000.

LISBON, OHIO.—Bids will be received by the Bi-County Board of County Commissioners of Stark and Columbian Counties, until 8 a. m., May 18, at Alliance, for furnishing the necessary materials and performing the labor for the erection of a laundry building and the furnishing and installing of laundry machinery and equipment at Fairmount Children's Home, Stark County. Plans and specifications can be seen at the Auditor's office in the Court-House at Lisbon or Canton and at the office of W. S. Epperson, Arch., Courtland Bldg., Canton.

LORAIN, OHIO.—Paul A. Rissman, of Lorain, has been employed by the U. S. Automatic Co. as Architect to construct its plant, and active work will be started at once. Surveyors have already been at work and have located the site. The plant will be erected on the east side of the company's property. The main building will be 50 × 70 ft. and of brick and steel construction. It will be 1-story high but a basement will be built under the greater part of the plant.

YOUNGSTOWN, OHIO.—The Selling Bros. Ice Cream Co., 3833 Cedar Ave., S. E., Cleveland, plans to establish an extensive plant in Youngstown, it is stated. Cost, $30,000.

NEW ALBANY, IND.—The S. J. Gardner Foundry & Machine Co., recently incorporated with a capital of $50,000, will build, establish and equip a foundry and manufacturing plant in this city.

GREENFIELD, IND.—Alvin Johnson, William Rafferty and Dr. E. B. Sisson are interested in a plan to erect a building in this city for the manufacture of a newly patented cement refrigerator, the invention of Mr. Johnson.

MICHIGAN CITY, IND.—The Haskell & Barker Car Co. is preparing to let contract for the construction and equipment of additional buildings to be built to its car factory. Estimated cost, $1,500,000.

CHICAGO, ILL.—The Kleine Optical Co., 52 State St., has purchased property at the northwest corner of East Superior St. and Fairbanks Court, and plans to erect a manufacturing building on the site.

HILLSBORO, ILL.—The American Smelter Co., of Boston, Mass., has decided to establish a smelter at Taylor Springs, one mile south of this city. It will cost $1,000,000, according to reports.

MANITOWOC, WIS.—William Rahr & Sons Co. has awarded the general contract for the erection of a malting plant at Sixth and Washington Sts., to PAUL RIESEN'S SONS, University Bldg., Milwaukee. The building will be 35 × 115 ft., six stories high, of reinforced concrete and steel construction. Cost, $35,000.

MILWAUKEE, WIS.—Carl Heim, Secy. of the Home Brewing Co., 319 Third St., has asked for revised plans from Fred Gatterdam, Arch., Chicago, Ill., for the proposed $500,000 cooperative brewing plant here. Under revised plans, bids will be taken after May 15 for a plant of 500,000 bbls. capacity, annually. Contracts will be awarded by Mr. Heim and the Architect about May 25.

✚NEENAH, WIS.—The Walter Brewing Co. has awarded the general contract for the erection of a reinforced-concrete elevator of 60,000 bu. capacity, to WETHERSPOON-ENGLE CO., of Chicago, Ill.

MINOT, N. DAK.—A [illegible] plant with a daily capacity [illegible] briquetting [illegible] tons of briquettes and 1,600,000 cu. [illegible] of gas for illuminating, heating and manufacturing purposes, will be established [illegible] Minot, according to reports, by the [illegible] Valley High Carbon Fuel Co.

✚ST. LOUIS, MO.—A [illegible] tory building has been [illegible] for a factory [illegible] Carleton, to occupy a lot [illegible] Murray [illegible] 252 ft., on the southwest corner of Page Boulevard and Newstead Ave. The structure [illegible] to be used as a shirt factory by the [illegible] Carleton Dry Goods Co., and is to cost [illegible]. It is to be fireproof, and with the exception of necessary structural parts, will be entirely of glass. It is to be constructed in the shape of the letter E, and the boiler and engine room are to be disconnected from the rest of the building. The plans were drawn by F. C. Bonsack, Arch., and the contractors are the HILL-O'MEARA CONSTRUCTION CO. The structure will be two stories high.

ST. LOUIS, MO.—The owners of the St. Louis Automobile & Engine Co., which was incorporated recently with a capital stock of $50,000, is planning to start a factory in St. Louis to make a rotary [illegible] engine. W. D. Williams, who recently came to St. Louis from Philadelphia, owns the patents on this engine, which is designed for use in automobiles as well as for other purposes. Charles F. Keene and Frank H. Braden are interested.

FORT STOCKTON, TEX.—The City Council has granted a franchise to operate an electric light and ice plant for a period of ten years to W. F. Zarbach [illegible] C. A. Shroff, of Cleveland, Ohio. Cost [illegible] 20,000.

PORT ARTHUR, TEX.—A sugar refinery is contemplated here by John W. [illegible] tes and associates. It is stated that the plant will cost $3,000,000.

ALPINE, TEX.—Oscar Pacius, of Monterey, and associates have organized the Continental Wax Co. with headquarters here, and it is announced that instead of installing one factory for the manufacture of wax from the candelilla weed, as was originally planned, it has been decided by the company to put up ten such factories in different localities of this region. The company has a capital stock of $500,000, all of which sum will be invested in the erection and equipment of the factories. It claims to have contracted for about five million tons of the weed.

GALVESTON, TEX.—The Magnolia Petroleum Co. has been organized, with headquarters here, to take over the oil-refining plants of ohn Sealy & Co., situated at Corsicana and Beaumont. The plants will be greatly improved.

HARLINGEN, TEX.—Gordon Hill will install a cotton-seed-oil mill and cotton gin at Harlingen.

OKLAHOMA CITY, OKLA.—Articles of incorporation are being filed by the Wood-Knight-Hawk Co., with a capital stock of $400,000. The incorporators include H. D. Knight, J. B. Wood, Homer H. Dunlap and F. J. Hawk. A plant to manufacture plows will be erected at a cost of $250,000. Mr. Knight will be Pres.

✚TRINIDAD, COLO.—ANDREW MAHTERS, of Denver, has been awarded the contract for the foundation work on the new plant of the Pell's Brewing & Ice Co. Work will be started immediately. The company recently paid $10,000 for a site and $75,000 will be expended in buildings. Noted last week.

OREGON CITY, COLO.—The Kilmer & Kinzlo sawmill, of Canby, has purchased 320 acres of timber land on the Abernathy Creek, about three miles from this city, where they intend erecting a sawmill.

PORTALES, N. MEX.—John Faulkner, of Hutchinson, Kan., will install a 15-ton ice factory here.

TUCUMCARI, N. MEX.—The Progressive broom factory at this place, owned by E. H. Fulwood and associates, will be enlarged. A number of new winding machines will be installed.

✚CHINO, CAL.—The RICHARDS NEUSTADT CONSTRUCTION CO., of Los Angeles, has secured the contract for erecting a 1-story brick and steel pulp mill building, 58 × 148 ft., at Chino, for the American Beet Sugar Co. Amount, $20,000.

MONTREAL, QUE.—E. Ingram, Managing Director of Ingram & Co., church organ builders, of London and Liverpool, has decided to construct an extensive organ manufacturing plant here.

✚WELLAND, ONT.—The Page-Hersey Iron Tube & Lead Co. has awarded the contract for its plant here to DAVID DICK & SONS, of Welland. Cost, $151,000.

ST. CATHERINES, ONT.—The Yale & Towne Co., of Stamford, Conn., manufacturers of Yale locks, etc., plans to establish a Canadian branch here.

✚WINNIPEG, MAN.—Official advices are to the effect that the results of bids received on April 10 by Frank Lee, Div. Engr. Canadian Pacific Ry. Co., are as follows: The contract to erect a boiler shop has been awarded to J. M. D. COY, Cortage Ave. East Winnipeg, and the upholstery shop to CARTER-HALLS-ALDINGER, Union Bank Bldg., Winnipeg.

SASKATOON, SASK.—Benjamin Wood has purchased 189 acres a short distance from the city, and a company of Minneapolis capitalists whom he represents will build a plant for the manufacture of flax, binder twine and other products.

✚SILVERTON, B. C.—The Standard Silver Lead Mining Co., owning the Standard mine at Silverton, recently let a contract to CHALMERS & WILLIAMS, 115 Adams St., Chicago, Ill., for the ironwork and machinery for a concentrator to be erected at Silverton. The mill, complete, will cost in the neighborhood of $30,000.

MISC[illegible]LANEOUS CONTRACTS.

(*Denot[illegible] that this work is advertised in Engineering News.)

U. S. [illegible]ECLAMATION SERVICE.—All news co[illegible]ing canal and irrigation projects, et[illegible] will be found under Water Supply—Irrig[illegible]on.

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*BREA[illegible]ATER.—Portland, Me.—Bids will be [illegible]eived by Lt.-Col. W. E. Craighill, Co[illegible] Engrs., U. S. A., Portland, until noo[illegible]une 1, for the construction of a breakw[illegible] at Isle of Shoals, Me.

DRE[illegible]G.—Newton, Mass.—A bill has been r[illegible]ed to the Legislature favoring a loan o[illegible],000 for dredging the Charles River i[illegible]Newton and Waltham. William B. de las [illegible]sas is Chn. Metropolitan Park Comn.. [illegible]ston, Mass.

DRE[illegible]G.—Boston, Mass.—Bids were received [illegible]follows, on April 29 by Col. Frederic V. [illegible]bot, Corps Engrs., U. S. A., Boston, for d[illegible]ing in Weymouth, Fore River, Mass. [illegible] P. O'Riorden, Charlestown, Mass., 25⅜ [illegible] Eastern Dredging Co., Boston, 13 8/1[illegible]ts.; Daly & Hannon Dredging Co., Ogden[illegible]rg, N. Y., 13¾ cts.; G. H. Breymann [illegible]Bros., Toledo, Ohio, 14 cts.; Charles M. Co[illegible] Fall River, Mass., 17½ cts.; Bay State [illegible]dging Co., Ltd., Boston, 18 cts.

REM[illegible]ING WRECK.—Boston, Mass.—Bids were r[illegible]ived as follows, on April 28 by Col. Freder[illegible] V. Abbot, Corps Engrs., U. S. A., for re[illegible]ving wreck of the Schooner "Davis Palmer" from Broad Sound, Boston Harbor: Eugen[illegible] Boehm, Atlantic City, N. J., $6,622; Lewis W. Blix, Harry A. Hanbury, Brooklyn, N. Y., $16,100; Johnston & Virden, Lewes, Del., $15,207; C. T. Johnston & Co., Lewe[illegible] $11,223; Betts Bros. & Co., Boston, $12,87[illegible]; Merritt & Chapman Derrick & Wrecking Co., New York, $27,742.

CEM[illegible]NT.—Brookline, Mass.—Bids will be receiv[illegible] until May 8 by the Board of Selectmen, Edward A. McEttrick, Secy., for Portland cement and stoneware.

✚FERRYBOAT.—Boston, Mass.—We are officially advised that bids were received as follows on April 25 by the city for a double-screw ferryboat: (a) boat with steel hull; (b) with wooden hull; (c) time: Maryland Steel Co., Baltimore, (a) $155,000, (c) 7½ months; W. M. McKIE, East Boston, Mass., (b) $120,-750 (awarded contract), (c) 7 months; The Atlantic Works, East Boston, Mass, (b) $121,450, (c) 7 months; Bertelsen & Petersen Engineering Co., East Boston Mass. (b) $117,000, (c) 11 months; W. & A. Fletcher Co., Hoboken, N J. (a) $129,950, (b) $127,-450, (c) 8 months.

✚LIFE SAVING STATION.—South Kingston (Kingston post-office), R. I.—The Life Saving Service, Washington, D. C., has awarded the contract for a life saving station at Green Hill, South Kingston, to the R. A. SHERMAN SONS CO., of Westerly, R. I., at $15,000.

ROAD OIL.—Hartford, Conn.—Bids will be received by the Board of Contract and Supply until 11 a. m., May 8, for furnishing the Street Department with not less than 50,000 gallons of road oil to conform to specifications on file with the Board of Street Commissioners.

*TIMBER BULKHEAD.—Stamford, Conn.—Bids for furnishing the necessary material and constructing a timber bulkhead on the property of The Southfield Point Co., on the west shore of Stamford Harbor, will be received at the office of Francis L. Field, Attorney for the company, at No. 165 Broadway, New York, until May 22. Information furnished on application to the company's attorney.

ROAD OIL.—New York, N. Y.—Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., May 11, for furnishing and delivering 16,000 gallons of road oil for Parks, Boro. The Bronx.

HOUSE.—New York, N. Y.—Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., May 11, for furnishing all the labor and materials for the erection and completion of a zebra house in the New York Zoological Park, in Bronx Park, City of New York.

✚METAL VAULT LININGS.—New York, N. Y.—The contract for installing metal vault linings in the U. S. Assay Office, New York, has been awarded to the MOSIER SAFE CO., of Hamilton, Ohio, at $37,315.

ELEVATOR TOWER.—Buffalo, N. Y.—The Frontier Elevating & Milling Co. will build a reinforced concrete elevator tower. Estimated cost, $25,000.

BATH REPAIRS.—New York, N. Y.—Bids will be received by Alfred E. Steers, Pres. Boro. Brooklyn, until 11 a. m., May 10, for furnishing all the labor and material required for repairs and alterations to four free floating baths in the Borough of Brooklyn, for the year 1911.

PIPE, ETC.—New York, N. Y.—Bids will be received by George McAneny, Pres. Boro. Manhattan, until 2 p. m., May 10, for miscellaneous supplies, consisting of pipe and fittings, elbows, tees, caps, couplings, bushings, valves, nipples, enamel street signs, etc.

✚DREDGING.—Tompkinsville, N. Y.—Bids were opened as follows, on April 13, by the Inspector of the Third Lighthouse District, for dredging the basin at the general depot here: Du Bois Bros., 19 Whitehall St., New York, 26 cts. per cu. yd.; P. Sanford Ross, In[illegible] Jersey City, N. J., 19.9 cts.; Wilford E. Potter, Jersey City, 21 cts.; HENRY DU BOIS & SONS CO., 17 State St., New York, 15[illegible] cts. (awarded contract).

[illegible]UMBER.—Fort Hancock, N. J.—Bids will be received until 10 a. m., May 15, by Col. R[illegible]innie, Commanding Officer, Sandy Hook P[illegible]ing Ground, Fort Hancock, for furnishin[illegible] lumber.

[illegible]AL-HANDLING EQUIPMENT.—Easton, P[illegible]—The Lehigh Valley R. R. Co. will equip [illegible] South Easton shops with coal-storage [illegible]ker and coal-handling equipment. The c[illegible]ract has been awarded to the GUARAN-T[illegible] CONSTRUCTION CO., 90 West St., New York.

ELIMINATION OF GRADE CROSSINGS.—Philadelphia, Pa.—Bids will be received until noon, May 10, by W. Hunter, Ch. Engr., Philadelphia & Reading Ry. Co., Reading Terminal, Philadelphia, for the following work appurtenant to the abolition of grade crossings on the Richmond Branch Elevated: Contract No. 24, masonry walls and abutments between Trenton Ave. and Richmond St.; Contract No. 25, bridges ready for ballast over Aramingo Ave., Belgrade and Thompson Sts.

OIL BARGES.—Washington, D. C.—The contract has been awarded to the MARYLAND STEEL CO., Sparrows Point, Baltimore, by the Navy Department for constructing two self-propelled oil barges.

*CABLES, CONDUITS, ETC.—Washington, D. C.—Bids will be received until 2 p. m., May 10, by the Department of the Interior, Washington, for the installation of cables, conduits, panel and manhole boxes, and making the connections in the buildings and grounds of Howard University, Washington. Carmi A. Thompson is Asst. Secy.

*COAL BUNKER, ETC.—Washington, D. C.—Bids will be received until 2 p. m., May 18, by the Department of the Interior, Washington, for a concrete coal bunker, etc. For details, see advertisement in this issue.

CEMENT.—Washington, D. C.—See item under Water Supply—Irrigation.

✚REVENUE CUTTERS.—Washington, D. C.—The contract has been awarded by the Revenue Cutter Service, Treasury Dept., Washington, to the NEWPORT NEWS SHIPBUILDING CO., Newport News, Va., for constructing two revenue cutters. Noted on April 20.

STEEL.—Washington, D. C.—Bids will be received until May 9 by the Bureau of Supplies and Accounts, Navy Dept., Washington, for furnishing 38,500 lbs. of forged or hot-rolled steel, 22,100 lbs. of sheet steel, and 19,900 lbs. of galvanized sheet steel under Schedule No. 3,510.

CABLE.—Washington, D. C.—Bids will be received until May 9 by the Bureau of Supplies and Accounts, Navy Dept., Washington, for oilproof cable, Schedule 3,510; also for miscellaneous telephone cable, Schedule 3,509.

SUBMARINE CABLE.—Washington, D. C.—The contract for furnishing paper-insulated, lead-covered submarine cable for the Signal Corps, U. S. A., bids opened April 14, has been awarded to the WESTERN ELECTRIC CO., 463 West St., New York. Noted on April 27.

CABLE.—Washington, D. C.—The contract for furnishing the Signal Corps, U. S. A., with 170 miles of single-conductor intermediate cable, bids opened on April 15, has been awarded to the ATLANTIC INSULATED WIRE & CABLE CO., 120 Liberty St., New York.

CASTINGS.—Washington, D. C.—Bids were received as follows on April 25 by the Corps of Engineers, Washington, for furnishing a quantity of castings and bolts for the Cabin John Bridge, Baltimore: Wilson Foundry Co., Cincinnati, (a) castings per ton, $63.30; bolts (b) $4.75 per 100; Reeves Bros., Alliance, Ohio, (a) $72.23, (b) $4.79; Richard Mfg. Co., Bloomsburg Pa., (a) $61.60, (b) $5.25; Sturt Foundry Co., Pittsburg, (a) $64.40, (b) $3.58; Exeter Machine Works, Pittston, Pa., (a) $58.12, (b) $5.12; W. Van R. Whitall, New York, (a) $44.73, (b) $4.45; A. F. Brown Co., New York, (a) $55.87, (b) $5.25; Rosedale Foundry & Machine Co., Pittsburg, (a) $59.50, (b) $4.82; Steacy-Schmidt Mfg. Co., York, Pa., (a) $47.25, (b) $5.10; Bethlehem Steel Co., South Bethlehem, Pa., Pittsburg, (a) $140, (b) $3.50; Union Foundry & Machine Co., Pittsburg, (a) $169, (b) $3.83; Starrett-Thomas Foundry Co., Pittsburg, (a) $64.40, (b) $3.58; Chattanooga Car & Foundry Co., Chattanooga, Tenn., (a) $53.75, (b) $7.84; Glamorgan Pipe & Foundry Co., Lynchburg, Va., (a) $64.80; Marshall Foundry Co., Pittsburg, (a) $67, (b) $3.70; Trenton Foundry & Machine Co., New York, (a) $38.94, (b) $4.44; Camden Iron Works, Camden, N. J., (a) $53.76, (b) $4.07; Eastern Supply Co., Philadelphia, (a) $70, (b) $4.50; Ellicott Machine Co., Baltimore, (a) $61.37, (b) $4.75; Standard Foundry Co., Buffalo, N. Y., (a) $46.68, (b) $3.77; Fawcus Machine Co., Pittsburg, (a) $54.94, (b) $4.17; Bartlett-Hayward Co., Baltimore, (a) $67.50, (b) $4.75; Buffalo Forge & Machine Co., Buffalo, (a) $83.60, (b) $6.60; Davies & Thomas Co., Catasauqua, Pa., (a) $60, (b) $47.35 (*sic*); Stuart R. Carr & Co., Baltimore, (a) $54.88, (b) $4.73.

✚ISOLATION HOSPITAL.—Fort Monroe, Va.—The contract for the construction of an isolation hospital at Fort Monroe has been awarded to R. H. RICHARDSON & SONS, Hampton, Va., at $13,810.

*DREDGING.—Norfolk, Va.—Bids will be received until noon, June 1, by Lt.-Col. Mason M. Patrick, Corps Engrs., U. S. A., Norfolk, for dredging in harbor at Norfolk.

*DIKES.—Savannah, Ga.—Bids will be received until noon, May 31, by Col. Dan C. Kingman, Corps Engrs., U. S. A., Savannah, for building and repairing dikes in the Savannah River, near Augusta, Ga.

*BULKHEAD.—Mobile, Ala.—Bids will be received until 11 a. m., May 27, by Maj. C. A. F. Flagler, Corps Engrs., U. S. A., Mobile, for constructing 1,150 ft. of creosoted timber bulkhead at Mobile.

*CEMENT.—Montgomery, Ala.—Bids will be received until 1 p. m., May 31, by Lt.-Col. G. D. Fitch, Corps Engrs., U. S. A., Montgomery, for furnishing about 35,000 bbls. of American Portland cement.

*DRAINAGE CANALS, LEVEES, ETC.—New Orleans, La.—Bids for the excavation of drainage canals, construction of levees, construction of pumping plant and such other work as is necessary to the complete drainage of Sub-Divisions 1 and 2 of the Bayou Sale Drainage District will be received by the Board of Commissoiners until noon, June 6, at 920 Hibernia Bldg., New Orleans. Plans, specifications, and all necessary information may be obtained from J. F. Coleman & Co., Engrs., 920 Hibernia Bldg., New Orleans.

✚ELEVATOR.—Columbus, Ohio.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded to the OTIS ELEVATOR CO., Columbus, Ohio, the contract for furnishing two electric elevators for the Columbus post-office, at $11,162.

FIRE ENGINES, REPAIRS TO BOAT.—Cleveland, Ohio.—Bids will be received until noon, May 8, by F. G. Hogen, Dir. Pub. Safety, for two-third size Manning steam fire engines, and for repairs to fireboat "Clevelander."

✚SHELTER HOUSE AND COMFORT STATION.—Cincinnati, Ohio.—Bids have been received as follows for a shelter house and comfort station by the Board of Park Commissioners: Cotteral Building Co., $10,773; Charles Rosenstiel & Son, $9,865; M. Marcus Building Co., $10,773; WILLIAM MILLER & SON, Pearl and Martin Sts., Cincinnati, $9,373 (awarded contract).

LEVEE.—Brazil, Ind.—The Eel River levee, recently washed away, will be rebuilt. The County Commissioners will let the contract. The levee is nearly four miles in length.

LUMBER.—Jeffersonville, Ind.—Bids will be received until May 12 by Maj. J. T. Davidson, Const. Q. M., U. S. A., for furnishing 30,000 ft. of cottonwood lumber No. 1; 2,000 ft. of white pine, B, select; and 20,000 ft. of gumsap lumber No. 1.

*DREDGING.—Detroit, Mich.—Bids will be received until 3 p. m., May 15, by Col. C. McD. Townsend, Corps Engrs., U. S. A., Detroit, for dredging Clinton River, Mich.

*STEAM ROLLER.—Grand Rapids, Mich.—Bids will be received by the Board of Public Works until 8 p. m., May 11, for furnishing a 10,000-lb. steam roller, of thetandem type, f. o. b. car, Grand Rapids, freight prepaid, according to the plans and specifications on file at the office of the Board. Samuel A. Freshney is Secy. and Gen. Mgr. Bd.

DREDGING.—Detroit, Mich.—Bids were received as follows, on April 23, by Col. C. McD. Townsend, Corps Engrs., U. S. A., for dredging Sections 1 and 2, Saginaw River, Mich.; (a) Section I, 792,000 cu. yds.; (b) Section II, 2,233,000 cu. yds.: Breymann Bros, Toledo, Ohio, (a) 12⅞ cts. per cu. yd., (b) 17 cts.; Greiling Bros, Green Bay, Wis., (a) 13 7/10 cts., (b) 22 cts.; Great Lakes Dredge & Dock Co., Chicago, Ill., (a) 14 cts., (b) 17 9/10 cts.; Adolph Bues, Milwaukee, Wis., (a) 15¼ cts., (b) 32 cts.; Michael Sullivan, Detroit, Mich., (a) 17¼ cts.; Edward Bros. Dredge Co., Sault Ste-Marie, Mich., (a) 17½ cts.; Zenith Dredge Co., Duluth, Minn., (a) 25 cts.; Duluth-Superior Dredging Co., Duluth, (b) 24½ cts.; Northern Dredge & Dock Co., Duluth, (a) 18 cts.; Duluth Marine Contracting Co., Duluth, (a) 16½ cts.

DRAINAGE.—Urbana, Ill.—Bids will be received by the Commissioners of the Newcomb Special Drainage District of Champaign and Piatt Counties, until 11 a. m., May 13, for the construction of the main drainage channel in the district. Henry Hawbaker is Comr., Mansfield, Ill.

*CHANNEL EXCAVATION.—Chicago, Ill.—Bids will be received until noon, May 18, by I. J. Bryan, Clk. Sanitary District of Chicago, American Trust Bldg., Chicago, for excavation and collateral work on Contract Section 3 of the Calumet Sag Channel. The approximate quantities for the comparison of bids are: 325,000 cu. yds. of glacial drift, 197,000 cu. yds. of rock excavation, 183,500 sq. ft. of channeling, 7,500 cu. yds. of concrete retaining wall, 11,400 sq. yds. of riprap slopes. Plans and specifications may be obtained upon application at the office of the District. Erroneously noted last week as 83,500 sq. ft. of channeling, and 114,000 sq. yds. of riprap slopes.

LEVEE.—East St. Louis, Ill.—Bids were received on April 19 as follows by the Board of Trustees, East Side Levee District, East St. Louis, for the construction of an earth levee, with crown 8 ft. wide, and length of three miles, Section 1, Front Levee: (a) embankment per cu. yd., (b) totals: J. A. Ware Construction Co., St. Louis, Mo., (a) 13.3 cts., (b) $27,705; McCann Bros. Construction Co., Murphysboro, Ill., (a) 13⅝ cts., (b) $28,040; R. H. & G. A. McWilliams, Chicago, Ill., (a) 14½ cts., (b) $29,850; S. R. H. Robinson & Son Construction Co., St. Louis, (a) 14 cts., (b) $29,605; Cameron, McMannis & Joyce, Keokuk, Iowa, (a) 13.39 cts., (b) $27,940; John Scott & Sons, St. Louis, (a) 13.68 cts., (b) $28,870; Mulvill Bros., Alton, Ill., (a) 15¾ cts., (b) $33,400. The work includes the following quantities: 200,000 cu. yds. of earth embankment, 130 lin. ft. of 30-in. c.-i. pipe, 10 cu. yds. of concrete, and one automatic flood gate, hand gate and one acre of grubbing.

✚STEEL SCOW.—Manitowoc, Wis.—The Manitowoc Dry Dock Co. has awarded the contract for constructing and equipping a 700-yd. steel scow, dump type, to the GREAT LAKES DREDGE & DOCK CO., Chicago, Ill., for delivery at Duluth, Minn., at $25,000.

DITCHES.—Osceola, Wis.—C. W. Staples will receive bids until 1.30 p. m., May 20, for the construction of Ditches Nos. 1, 2 and 3, of the Cushing Drainage District, 3⅝ miles long, and comprising 33,397 cu. yds. of excavation, three concrete arch culverts and 7½ miles of 5-wire fence.

DITCH.—Sibley, Iowa.—Bids will be received until noon, May 9, for the construction of county ditch No. 12, comprising 17,-000 ft. of 6 to 22-in. tile.

DITCH.—Jackson, Minn.—P. D. McKellar, County Audr., will receive bids until 4 p. m., May 12, for the construction of Judicial Ditch No. 12.

DITCH.—Glencoe, Minn.—Bids will be received until May 10 by E. D. Stocking, County Audr., Glencoe, for the construction of county ditch No. 18 and furnishing the following tile: 5,700 ft. 6-in., 4,000 ft. 7-in., 6,100 ft. 8-in., 4,850 ft. 10-in., 2,600 ft. 12-in., 2,800 ft. 14-in., 2,400 ft. 15-in., 814 ft. 18-in. Estimated cost, $7,033. I. C. Christlieb, lem State Farm in Fort Bend County; and Hutchinson, Minn., is Engr.

DRAIN.—Billings, Mont.—Contracts will be awarded as soon as necessary arrangements have been made for the construction of the Hulling drain. Estimated cost, $20,000. The Henry Gerbarz Engineering Co. is Engr., Billings.

DRAINAGE DISTRICT.—Warrensburg, Mo.—Bids will probably be asked in June for the construction of Big Creek Drainage District No. 1 of Johnson County. The main ditch will be 6.4 miles long, requiring 304,000 cu. yds. of excavation, and 85,000 cu. yds. of excavation in laterals. Brooks & Jacoby are Engrs., Shukert Bldg., Kansas City, Mo.

REVETMENT.—Kansas City, Mo.—Bids will be received until noon, May 22, by Maj. Edward H. Schulz, Corps Engrs., U. S. A., Kansas City, for constructing revetment in the Missouri River.

✚COMFORT STATION.—Kansas City, Mo.—The contract for the construction of a comfort station in Washington Square, the park and playground that will be opened this summer at Independence Ave. and Holmes St., was let, on April 25, by the Board of Park Commisioners, to A. KINGHORN. The building is to be of concrete, with a red tile roof, and the pergola that will adjoin it will cost $12,464. There were seven bidders.

ASPHALT PLANT.—St. Louis, Mo.—Bids were received as follows, on April 28, by the Board of Public Improvements, for the construction and installation of an asphalt plant: Warren Bros. Co., Boston, Mass., $19,800; Heatherington & Brenner, Indianapolis, Ind., $22,162; Equitable Asphalt Co., Kansas City, Mo., $16,700 (not accompanied by specifications).

DREDGING.—Missouri.—Contractors who are prepared to do dredging work near St. Louis, through the use of pumps, where about 20 or 25% of the material to be handled is sandy sediment, are invited to communicate with J. W. Fendrick, 504 Columbus Ave., Boston, Mass. The head would hardly be more than 50 ft., and the distance to convey the material about 600 to 1,000 ft. About 100,000 cu. yds. of sediment are to be moved.

✚LEVEE EMBANKMENT.—Cotton Plant, Ark.—Bids were received on April 24 by the Board of Directors of the White River Levee District for the construction of 60,000 cu. yds. of levee embankment across Jackson Bayou in Prairie County. The contract has been awarded to R. L. LEONARD, at 29 cts. per cu. yd.

✚DITCHES.—Dewitt, Ark.—The contracts for the construction of the drainage ditch petitioned for by J. R. Wulff and others has been awarded by the County Court to the following: To J. W. WRIGHT and T. W. KEATON, one allotment; L. B. CAPPS and M. ROLLISON four allotments; L. P. BRACY, one allotment. Estimated total cost, $37,339.

*DREDGING.—Galveston, Tex.—Bids will be received until noon, May 25, by Maj. G. P. Howell, Corps Engrs., U. S. A., Galveston, for dredging the mouth of Brazos River, Tex.

DRAINAGE.—El Campo, Tex.—Bids will be received in about 60 days by W. W. Duson, Secy. Drainage Bd., El Campo, for the construction of a drainage system in El Campo Drainage District. Estimated cost, about $350,000. John A. Norris, of El Campo, is Engr.

CANE CRUSHER, ETC.—Huntsville, Tex.—Bids will be received until noon, May 15, by the Prison Commission, Huntsville, for one sugar-cane crusher, 26 × 60 ft., at the Harlem State Farm in Fort Bend County.

COTTAGES, ETC.—Tekoa, Wash.—Bids will be received until 2 p. m., May 31, by R. G. Valentine, Comr. of Indian Affairs, Dept. of the Interior, Washington, D. C., for furnishing all labor and materials for the construction of two cottages and one barn at the Coeur d'Alene Agency, Idaho. Further information may be obtained from Morton D. Colgrove, Supt., Tekoa.

✚TUNNEL.—Spokane, Wash.—The contract for the construction of the tunnel between Spokane River and Sheridan St. has been awarded to BATES & ROGERS, of Spokane and Chicago, Ill., by the Chicago, Milwaukee & Puget Sound Ry. Co. The tunnel will run under Front Ave., and will cost $600,000.

✚STORAGE BUILDING, ETC.—San Francisco, Cal.—The contract has been awarded to the E. D. CROWLEY CO., 127 Montgomery St., San Francisco, at $29,894. List of bidders noted on April 6.

EXTENSION OF DIKES.—Vallejo, Cal.—Bids will be received until 11 a. m., June 3, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for the extension of dikes at the navy yard, Mare Island, Vallejo, Cal. R. C. Hollyday is Ch. of Bureau.

BREAKWATER.—Point Sapin, N. B.—Bids will be received until May 9 by R. C. Desrochers, Secy. Dept. Pub. Wks., Ottawa, Ont., for the construction of a breakwater at Point Sapin, Kent County, N. B.

✚ICE PLANT, WHARF, ETC.—Ottawa, Ont.—Contracts have been awarded as follows by the Department of Public Works, Ottawa: Ice piers at Annapolis Royal, N. S., to E. R. REID, of St. John, N. B., at $37,-300; government wharf at Michipicoten, Ont., to D. G. STEWART, of Ottawa, at $18,430; wharf at Ste. Famille, Que., to NAPOLEON TRUDEL, of St. Henri, Que., at $18,964; for a 15-in. suction dredge for the Maritime Providence, to LA CAMPAGNIE PONTBRIAND, LTD., Sorel, Que., at $59,865.

✚DUMP SCOWS.—Vancouver, B. C.—The contract for three 260-cu.-yd. dump scows has been awarded to GEORGE STEWART, EDWARD CHOATE and N. J. MAYHEW, of Vancouver, B. C., at about $22,300.

✚STEEL TUG.—Vancouver, B. C.—The WALLACE SHIPYARDS, of Vancouver, have been awarded the contract for a steel tugboat, at about $64,850.

U. S. POSSESSIONS.

(✚Denotes a contract awarded.)

PUMPS.—Philippine Islands.—Bids will be received until 2 p. m., June 15, by Thomas Cruse, Ch. Q. M., U. S. A., 556 Federal Bldg., Chicago, Ill., for furnishing and delivering to the Construction Quartermaster, Fort Mills, Corregidor, P. I., six 1,000,000-gallon pumps, overhead crane and automatic devices. Specifications and full information will be furnished on application.

TURBO-ALTERNATORS AND ELECTRIC EQUIPMENT.—Hawaii.—Bids were received as follows on April 29 by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for turbo-alternators and electrical equipment at the Naval Station, Pearl Harbor, H. T.: Westinghouse Electric & Mfg. Co., 803 Hibbs Bldg., Washington, D. C., $42,550, deduct $1,350 conditionally; General Electric Co., Schenectady, N. Y., $29,600.

AIR COMPRESSOR.—Hawaii.—Bids were received as follows on April 29 by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for an air compressor and accessories at the Naval Station, Pearl Harbor, H. T.: Laidlaw-Dunn-Gordon Co., 115 Broadway, New York, Item (1) $21,610; Ingersoll-Rand Co., 11 Broadway, New York, Item (1) $21,342 and $20,226, Item (2) $21,666; Nordberg Mfg. Co., Oklahoma Ave. and Chicago Road, Milwaukee, Wis., Item (1) $23,725, Item (2) $21,075.

BOILERS, OIL BURNING APPARATUS, ETC.—Hawaii.—Bids were received as follows on April 29 by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for boilers, oil burning apparatus, superheaters, flue and stack, at Naval Station, Pearl Harbor, H. T.: Edge Moor Iron Co., Edge Moor, Del., Item (1) $72,037, Edge Moor boilers, Foster superheaters, Owens oil burners, steel stack, flue and apparatus. E. Keeler Co., Williamsport, Pa., Item (1) $67,173 and $70,839; Deduct $1,007. Heine Safety Boiler Co., 1120 Pennsylvania Bldg., Philadelphia, Pa., Item (2) $68,790; add $2,547 for Foster superheaters. Chas. C. Moore & Co., 99 First St., San Francisco, Cal., Item (1) $81,300, B. & W. boilers, Foster superheaters. Item (2) $78,482, B. & W. boilers and B. & W. superheaters; deduct from either of above for unlined stack and flue without insulation, $6,781. Chas. C. Moore & Co., 99 First St., San Francisco, Item (1) $75,725, B. & W. cross drum boilers, Foster superheaters; Item (2) $72,847, B. & W. cross drum boilers, B. & W. superheaters; deduct from either of above for unlined stack and flue without insulation, $6,781.

CONTRACT PRICES.

*(*Denotes that this work is advertised in Engineering News.)*

PAVING.—Salt Lake City, Utah.—Bids were received on April 21, by H. G. McMillan, Chn. Bd. Pub. Wks., for curbing and paving in Paving Extension No. 64, from: (A) P. J. Moran; (B) Strang & Maguire. The item bids were as follows:

PAVING, SALT LAKE CITY, UTAH.

	A	B
3,820 cu. yds. excavation....	$0.80	$0.77
140 lin. ft. cement curbing with steel rim, 6×16-in.	.90	.85
275 lin. ft. cement curbing with steel rim, 6×16-in., curved	1.20	1.35
127 lin. ft. cement curbing with steel rim, 6×16-in., inc. 30-in. gutter.....	1.50	1.45
245 lin. ft. cement curbing plain, 6×16-in.	.60	.55
2,915 lin. ft. cement curbing, plain, 6×16-in., including 30-in. gutter..	1.15	1.20
120 lin. ft. cement curbing, curved, 6×16-in., including 30-in. gutter..	1.32	1.60
50 lin. ft. cement curbing, 6×24-in.	.75	.65
173 lin. ft. cement curbing, 6×24-in., including 30-in. gutter	1.23	1.50
66 lin. ft. cement curbing, 6×24-in., curved, including 30-in. gutter..	1.40	1.80
900 lin. ft. 30-in. cement gutter	.70	.45
50 lin. ft. false curb and 14-in. gutter	.95	1.15
12,219 sq. yds. asphalt pavement, with foundation.	2.50	2.45
922 sq. yds. concrete pavement	2.10	1.30
9 resetting manhole covers, each	5.00	5.50
2 valve boxes with c.-i. covers, each	36.00	35.00
3 valve boxes with asphalt filled covers.....	40.00	35.00
2 hydrant boxes, to be built, each	51.00	35.00
440 lin. ft. B. M. building flumes	15.00	45.66
102 lin. ft. resetting flumes	.30	...
61 lin. ft. furnishing and laying 4×10-in. guard timbers	.20	.22
56 lin. ft. furnishing and laying 4×6-in. guard timbers	.30	.27
3 removing trees, 6 ins to 1 ft. each..........	5.25	7.00
28 removing trees, 1 ft. and over, each........	7.50	7.50
3,820 cu. yds. excavation....	.80	.77
Totals	$44,573	$44,719

EXAMINATIONS.

HIGHWAY ENGINEER.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on May 24-25, to secure eligibles from which to make certification to fill vacancies as they may occur in the positions of Highway Engineer and Senior Highway Engineer in the Office of Public Roads, Department of Agriculture, at salaries ranging from $1,440 to $1,980 a year, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer, or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Mathematics, 15 points; theory and practice of surveying and surveying instruments, 15 points; practical questions on road and bridge materials and construction, 40 points; training and experience, 30 points. Applicants must have reached their 20th birthday. Examination Form 1312.

FOREST PATHOLOGIST. — Washington, D. C.—The U. S. Civil Service Commission announces an examination to secure eligibles from which to make certification to fill four vacancies in the position of Forest Pathologist, Office of Investigations in Forest Pathology, Bureau of Plant Industry, Department of Agriculture, at $1,800 to $2,400 a year, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer or promotion. No merely scholastic or academic tests will be given, and competitors will not be required to appear at any place for examination. The examination will consist of the subjects mentioned below, weighted as indicated: Education and training, 50 points; experience in administration, technical work, or teaching, 25 points; experience in forest pathology, 25 points. Applicants must have reached their 20th birthday. Examination form 304 and special form.

TOPOGRAPHIC DRAFTSMAN AND COPYIST, TOPOGRAPHIC DRAFTSMAN.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on May 24-25, to secure eligibles from which to make certification to fill vacancies as they may occur in the positions of Topographic Draftsman and Copyist Topographic Draftsman, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer or promotion. The salary of the position of topographic draftsman ranges usually from $1,000 to $1,500 a year, and for copyist topographic draftsman from $900 to $1,500 a year. Both men and women will be admitted to this examination. This examination will consist of the subjects mentioned below, weighted as indicated: Topographic draftsman, drawing, 35 points; lettering, 35 points; mathematics, 30 points. Competitors who fail to attain an average rating of at least 70 in the subjects of drawing and lettering will not be eligible for appointment. Not more than five hours will be allowed on the second day for the work in lettering. Competitors who average 70 per cent or over in the subjects of drawing and lettering may also have their names entered on the copyist topographic-draftsman register, provided that they state in answer to Question 1 of the application that they desire both examinations. All Topographic-Draftsman positions in the Department at Washington are filled from this register, or, if there are no eligibles thereon, from the Copyist Topographic-Draftsman register. Copyist Topographic Draftsman: Drawing (a specimen of topographic drawing will be given for reproduction in india ink), 50 points; lettering (tests of short words in different styles of lettering, and numbers are given), 50 points. Applicants must have reached their 18th birthday. Examination Form 1,312.

SCIENTIFIC ASSISTANT IN WOOD UTILIZATION.—Washington, D. C. — The U. S. Civil Service Commission announces the postponement to May 24-25 of the examination announced to be held on May 10-11, to secure eligibles from which to make certification to fill two vacancies in the position of Scientific Assistant (qualified in wood utilization), in the Forest Products Laboratory of the Forest Service, Department of Agriculture, at Madison, Wis., at $900 to $1,200 a year, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. The position demands an elementary knowledge of the properties, structure, and uses of the different species of wood, including those of present importance or of promising value in commerce. Both men and women will be admitted to this examination. This examination will comprise a basis, consisting of obligatory subjects, and the major optional subject of wood utilization. No minor optional subjects will be given with this examination. Each applicant will be required to pass in the basis, or obligatory subjects, before any rating will be given in the major optional subject. English composition and report writing, 30 points; arithmetic, 20 points; general educational training, 50 points; No competitor who attains an average percentage of less than 70 in the obligatory subjects and an average percentage of less than 70 in the major optional subject will be eligible for appointment. Eligibles will be certified in the order of their average percentage in the major optional subject. The time allowed for the major optional subject will be indicated on the question sheet. The subject of wood utilization will comprise the following elements: A thesis, preferably upon some phase of the subject, to be submitted with the application, 20 points; practical questions, 60 points; training and experience in the specific work covered by the subject, 20 points. Applicants must have reached their 20th birthday. Examination form 1312.

DRAINAGE ENGINEER.—Washington, D. C.—The U. S. Civil Service Commission announces examination on May 24, to secure eligibles from which to make certification to fill four vacancies in the positions of Drainage Engineer and Assistant Drainage Engineer in Drainage Investigations, Office of Experiment Stations, Department of Agriculture, at salaries ranging from $1,200 to $2,000 a year, and vacancies requiring similar qualifications as they may occur in that Department, unless it shall be decided in the interest of the service to fill one or more of the vacancies by reinstatement, transfer, or promotion. The duties of the position will be performed chiefly outside of Washington, D. C., and will consist in assisting in or carrying on drainage surveys in various parts of the United States, with the preparation of reports and plans, and also in carrying on original investigations and securing and reporting upon drainage data and information, and in representing the office in the field at all times. While engaged in such surveys or when away from either official or temporary headquarters, the expenses of the engineer are paid. The eligibles obtained from this examination will be classified into two groups in accordance with the rating received on education, training, and experience. Those who receive 90 per cent. or over on this subject will be eligible for drainage engineer positions at salaries ranging from $1,600 to $2,000 a year, but there is opportunity for promotion, upon satisfactory service, up to $2,500; those who receive a rating on this subject of 70 per cent. or over, but less than 90 per cent. ,will be eligible for certification to assistant drainage engineer positions at salaries ranging from $1,200 to $1,500 a year. After this classification has been made with reference to education, training and experience, eligibles will then be certified by their average percentages in the entire examination from each of these groups according to the salaries which they are willing to accept; and accordingly those eligibles who attain less than 90 per cent. in this subject and who are unwilling to accept appointment at as low as $1,500 a year will not be certified. The examination will consist of the subjects mentioned below, weighted as indicated: Practical questions on drainage engineering(35 points; report (to be submitted to the examiner on the day of the examination), 25 points; education, training and experience, 40 points. Examination Form 131.

INDUSTRIAL NOTES.

MR. J. P. ROSENBERG has been appointed Chicago representative of the National Paint & Varnish Co., of Cleveland, Ohio.

THE FIRM OF WHITE & PLATT, consulting engineers, Durham, N. C., has been dissolved. The business of the firm will be carried on by Mr. Gilbert C. White, Assoc. M. Am. Soc. C. E., of Durham, N. C.

MR. B. J. SIGMUND, who until recently has been in charge of the estimating department of the Trussed Concrete Steel Co., Detroit, has been placed in charge of a new office at 710 Denckla Bldg., Philadelphia.

ANDRESEN-EVANS CO., manufacturers of grab buckets for handling ore, coal, crushed stone, sand, and excavating, have removed their offices from 1501 Monadnock Bldg., to 635 Railway Exchange Bldg., Chicago.

THE PITTSBURGH TESTING LABORATORY, Pittsburg, have moved into their new five-story office and laboratory building at the corner of Seventh and Bedford Aves., where they will have more complete facilities for looking after clients.

THE ALLEN & GARCIA CO., McCormick Bldg., Chicago, has been incorporated by Mr. Andrews Allen, M. Am. Soc. C. E., and Mr. John A. Garcia to carry on business as consulting and contracting engineers.

MR. HENRY R. COBLEIGH, Jun. Am. Soc. M. E., has resigned as mechanical editor of the "Iron Age," which position he has held for the last seven years, to take charge of the advertising and publicity of the International Steam Pump Co., 115 Broadway, New York City.

CHALMERS & WILLIAMS have recently moved their offices from 120 Liberty St., New York, N. Y., into the Singer Bldg., 149 Broadway, Rooms 3015 and 3016, where Mr. J. F. Orr, their Eastern Manager, will be glad to receive persons interested in crushing and cement machinery.

THE JOBSON-GIFFORD CO., 25 East 26th St., New York, has been incorporated, consolidating the interests of the Bowles-Gifford Co., and the Jobson-Hooker Co., for the continuance of the structural steel business formerly carried on by the original companies, by the same personnel.

THE T. W. SNOW CONSTRUCTION CO., Ellsworth Bldg., Chicago, has been organized by Mr. T. W. Snow to carry on the business of the design and construction of coaling and water stations, water purification plants, power plants, etc. Mr. Snow has been for some years President of the Otto Gas Engine Works, at Chicago.

E. G. SALTMANN CO. has removed to 134 West 29th St., New York City. This house is widely known as a mail order house, handling engineers' supplies, especially blue print paper and tracing cloth. The new building, which will be the home of the firm, is known as the Saltmann Tee Square Bldg. It is 100 × 100 ft. and 12 stories and basement in height.

THE MURRAY IRON WORKS CO., of Burlington Iowa, are completing an extensive addition to their boiler shops in the shape of a steel frame building 140 x 120 ft., with a large traveling crane down the middle and smaller cranes on the sides. This addition will enable the works to produce more water-tube, tubular and fire-box boilers in the future than they have been able to do in the past.

A CONVENIENT MEMORANDUM book has recently been designed by Charles C. Moore & Co., Engineers, San Francisco, Cal., the Pacific Coast Branch of the Babcock & Wilcox Co. The pages are perforated into rectangles of a size convenient for making short notes. These may, if desired, be removed and destroyed or filed away for future reference. It is inserted in a leather case and new inserts can be had as desired. These books will be mailed to engineers who make application for them.

THE PIEDMONT PORTLAND CEMENT & LIME CO., Aragon, Ga., has completed its new plant for manufacturing the "Piedmont" brand of Portland cement. The capacity is 600 barrels daily, which will be doubled during 1911. The dry process is used, the raw materials being limestone and shale. The equipment includes a C. & G. Cooper tandem-compound engine, Kennedy gyratory rock crusher, Manitowoc kilns and driers, Chalmers & Williams ball-tube [illegible] and Fuller mills in the raw material [illegible] and fin-ishing end. Ingersoll-Rand [illegible] are used and there is Western Electric [e]quipment for lighting and for operating the [ma]chine shop burning department and coal [illegible]. A town named Portland, Ga., is being [est]ablished at the plant. The officers of the [com]pany are President, J. C. Bass; Se[cretar]y, W. H. Davis; Superintendent, Wm. [illegible] [D]avis.

MR. PAUL C. VAN ZANDT, [illegible] Am. Soc. M. E., has recently become [iden]tified with the Stephens-Adamson Mfg. [Co., o]f Aurora, Illinois, and has assumed the [m]anagement of their cement mill department. His headquarters will be at the company's Chicago office in the First National B[ank] Bldg., and this branch office will be under [his] charge. Mr. Van Zandt has been associated with the Portland cement industry almost since its origin. For twelve years he [was c]onnected with the Allis-Chalmers Co. [and] with the Gates Iron Works, which was [abso]rbed by the Allis-Chalmers Co.), as [mech]anical engineer and cement expert. During that time he had charge of that company's [m]echanical engineering design in the cru[shing] and cement industry, and he designed and installed practically all of the cement [plant]s which they have built. This includes [man]y of the largest mills of this country, and [of] Canada, Mexico and Cuba. His recent [as]sociation with the Stephens-Adamson Mfg. [Co.] of Aurora, Illinois, manufacturers of [c]onveying machinery, indicates a tendency [in] cement mill designs.

THE UNIVERSAL VANADIUM CO. has recently been incorporated with the following officers and directors: [Pr]es., Edward M. McIlvain, 30 Church St., New York, N. Y.; Vice.-Pres., Colonel Millard Hunsiker, 23 Rue de la Paix, Paris, France; Secy. and Treas., James C. G[illie], Frick Bldg., Pittsburg, Pa.; Mr. Joseph W. De Wyckoff, European Representative, 64 Victoria St., Westminster, London, England; Mr. E. Marshall Fox, Wetley Rocks, Staffordshire, England; Mr. Sylvester D. Townsend, Jr., Wilmington, Del.; Mr. William McIlvain, Reading, Pa. Ever since the formation of the American Vanadium Co. the entire product of vanadium alloys produced by this company has been marketed by the Vanadium Sales Co. of America. The offices of both companies have been in the Frick Bldg., Pittsburg, Pa., and their products, especially Ferro-Vanadium, have been sold in every manufacturing country in the world. The Universal Vanadium Co. was formed for the purpose of acting as selling agents for the American Vanadium Co., in a more comprehensive and effectual manner and it will act in a selling capacity in conjunction with the Vanadium Sales Co. of America, both companies thus taking charge of the entire product of the American Vanadium Co.

THE WHEELER CONDENSER & ENGINEERING CO., Carteret, N. J., has recently been awarded the contract for building five large surface condensing equipments. The condensers proper will all be of the Wheeler dry tube type, similar to other Wheeler dry tube condensers in that first, the tubes are so grouped as to secure the best distribution of the steam and secondly, in that drain plates are interposed at numerous levels in the condenser to prevent steam condensed in upper parts of the shell from falling upon and flooding tubes in the lower part. The drain plates also carry off the water of condensation to the hotwell, without bringing it into contact with tubes, thus insuring a high hotwell temperature with a corresponding saving in heat. These equipments will differ, however, from previous condensers in the special design necessary to handle the large amounts of steam, at the same time securing high vacuum and high rate of heat transmission through the surface. Three of these dry tube condensing equipments will be for the Waterside No. 1 plant of the New York Edison Co., and will consist of circulating, hotwell and vacuum pumps, together with specially designed base condensers to operate in connection with three 20,000-KW. turbo-alternators. These condensers will have a rated capacity of 300,000 lbs. of steam per hour, and will be the largest of their kind in the world. The other two condensing equipments will be for 10,000-KW. turbines with pumps and other auxiliaries, to be supplied for the new power station of the Minneapolis General Electric Co.

FOREIGN TRADE and the opportunities for developing it has been the special study of Mr. W. C. Redfield, Second Vice-Pres. of the American Blower Co., Detroit, Mich. Mr. Redfield left this country in November, 1910, on a trip around the world, and in a letter to the American Blower Co., dated March 21, from Calcutta, he writes as follows:

"I have now traversed Japan, The Philippines, Hong Kong, Java, The Straits Settlements and Burma to India. This covers the possessions of the United States, Holland, and Great Britain in the East, as well as Japan, and I cannot say that thus far I have found any prejudice against American goods. Indeed, certain classes of American products have been everywhere in evidence. Among these are sewing machines, typewriters, toilet articles and soaps, locomotives (in Japan), petroleum products, and others. These are precisely those that have been most carefully and steadily brought before and kept before the attention of buyers in these various lands. I ought also to add that American cameras and photographic supplies were everywhere except in Java; there no films of any kind could be had only plates. In many stores finding one article selling I would ask why not such and another, only to find simply that they did not know of it, and in some cases to have a note at once made of it.

"I have run across horrible neg[lect] in packing even after attention was called to it. In one case oil stoves were formerly bought in America and the American product was concededly better, but, after warning the American goods were so badly shipped that one-half of one shipment arrived broken. Now the dealer buys in Europe and pays a higher price. He told me he did not want to

do this bu[illegible]e had to, for American makers would no[illegible]sten to him.

"Bitte[illegible]mplaint is made that American houses [illegible] young irresponsible boys to do their m[illegible] instead of having some clerk of fair re[illegible]onsibility attend to this important service. [illegible] result is misaddressed letters so that [illegible]onses are not received, and the regular [illegible]tual neglect to prepay postage causing [illegible]a charges.

"A [illegible] Boston house wrote to Manila June 8, [illegible] on June 23 followed it up with a shar[illegible]tter insisting on an immediate reply. [illegible]ew York firm referred an inquiry from [illegible]a to its Manila agent. These are some of the things that handicap Americans.

"I do not find prices to be the obstacle. Several American manufacturers I have met tell me their prices are lower than their European competitors. This is true of locomotives, for example.

"What I find chiefly needed to greatly enhance our export trade in America is knowledge—knowledge of geography—of the peoples, their ways and needs—their business methods.

"Foreign trade does not essentially differ in its basis from domestic trade. A man selling in Michigan studies Michigan needs, offers goods Michiganders want, tells about them in the way the good people of Michigan understand. If he does not do so the wise ones in Michigan turn him down. A man in larger trade does not assume that Texas and Florida use the goods that sell in Maine; he finds out what are wanted or not wanted and acts accordingly. You don't spend much on heating apparatus for Louisiana, and this is all there is underlying export trade, but because it is just outside the immediate horizon and men are busy, they often do not even inquire about it and when they do and find that it takes time and care and patience they take the near and obvious and let the other go. In this way the trade of Empires is neglected and great opportunities are lost. Sometimes houses "peter out" and give up the game too soon to win. Two concerns came from America to India where the prejudice, not so much against American goods as in favor of English goods, is very strong. One, after six months, began to reduce expenses, took a smaller office, then a still smaller one, then closed up. The other lost $20,000 the first year; they had a good man on the spot and held on. The second year they came out even. The third year they got back the $20,000. Then they got it back many times with interest, for they had means and courage to stand the gaff."

LIST OF CONTRACTS PENDING

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file for reference only unless otherwise noted at the office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.		Noted in issue of
5- 4	Construction of foundations, Brooklyn, N. Y.	5- 4
5- 6	Repairs to slips, Norfolk, Va. (S.)	4- 6
5- 6	Ice machinery, etc., Washington, D. C. (S.)	4-27
5- 9*	Interceptor, Toronto, Ont. (S.)	4-27
5-13	Elec. light machinery, Washington, D. C. (S.)	4-27
5-16*	Drainage canals, etc. Swanquarter, N. C. (P. & S.)	4-27
5-20	Roof coverings, Norfolk, Va. (S.)	4-27
5-27	Pumping equip., Norfolk, Va. (S.)	4-27
5-27	Wharf, trestle, etc., Alaska (S.)	4-13
6- 1*	Canal enlargement, Boise, Idaho. (S.)	3-30
6- 3	Floating cranes, Hawaii (S.)	4- 6
6- 3	Locomotive, Portsmouth, N. H. (S.)	4-27

Light, Heat and Power Plants.

Bids close.		Noted in issue of
5- 5	Engine and generators, Gallatin, Tenn.	4-27
5- 6	Power plant, etc., Avondale, O.	4-13
5- 8	Conduits and wiring and lighting systems, Richmond, Va.	4-13
5- 8	Power-house, Sykesville, Ind.	4-27
5- 8	Electrical equip., New York, N. Y.	4-27
5- 8	Electrical equipments, Brooklyn, N. Y.	5- 4
5- 8	Conduits, wire, posts and lamps, South Pasadena, Cal.	5- 4
5- 9	Rewiring, New York, N. Y.	5- 4
5- 9	Lamp posts, New York, N. Y.	5- 4
5- 9	Feed-water heater, Leavenworth, Kan.	4-27
5- 9	Reflectors, Toronto, Ont.	5- 4
5-10*	Heating and ventilating apparatus, Richmond, Va.	4-13
5-10	Power dam, etc., Yorkville, Ill.	4-20
5-10	Lock & dam, Woodlands, W. Va.	4-27
5-10	Electrical equip., Albany, N. Y.	4-27
5-11	Power plant equipment, Anaheim, Cal.	5- 4
5-13	Elec. light machinery, Washington, D. C.	4-27
5-13	Steam heating plant, Burlington, Ky.	4-27
5-15*	Fuel and supplies, West Point, N. Y.	4-20
5-15	Power plant, Eagle Dam, Tex.	4-27
5-15	Electrical equipments, Toledo, O.	4-27
5-15	Transformers, Winnipeg, Man.	5- 4
5-16	Electric plant, Columbia, Mo.	5- 4
5-23	Generators, Dayton, Ohio	5- 4
5-24	Franchise, Riverside, Cal.	4-27
6-17	Lighting system and fixtures, Helena, Mont.	5- 4

Bridges.

Bids close.		Noted in issue of
5- 4	Bridges, Henderson, Ky.	5- 4
5- 5	Bridge work, Hollidaysburg, Pa.	5- 4
5- 8	Bridge, Richmond, Va.	5- 4
5- 8	Bridge, Louisvillle, Ky.	5- 4
5- 8	Bridge, Lyons, Kan.	5- 4
5- 8	Bridge, Shelbyville, Ind.	4-20
5- 8	Bridges, Washington, Ind.	4-27
5- 9	Bridges, Butler, Pa.	4-27
5- 9	Bridges, Philadelphia, Pa.	5- 4
5- 9	Trestle and fill, Eureka, Cal.	5- 4
5-10	Bridge work, Newark, Ohio	4-20
5-10	Bridges, Baltimore, Md.	4-27
5-11	Bridge, Redding, Cal.	5- 4
5-11	Bridge, Bowling Green, Ohio	5- 4
5-11	Bridge repairs, Boston, Mass.	5- 4
5-12	Bridge, Richmondville, N. Y.	5- 4
5-13	Bridge, Barnstable, Mass.	5- 4
5-13	Bridge, Sidney, Ohio	5- 4
5-15	Bridge, West Chester, Pa.	5- 4
5-15	Bridge, Milwaukee, Wis.	5- 4
5-15	Bridge, Delaware, Ohio	5- 4
5-16	Bridges, Dauphin, Man.	4-20
5-16	Substructure, Columbus, Ohio	4-27
5-22	Bridge work, Lorain, Ohio	5- 4
5-29*	Bridge work, Cincinnati, Ohio	5- 4
6- 1	Bridge work, New York, N. Y.	4- 27
6-17	Bridge, Spain (Foreign)	4- 6

Buildings.

Bids close.		Noted in issue of
5- 4	Addit'n to school, Sandusky, Mich.	5- 4
5- 6	Church, Sterling, Colo.	5- 4
5- 6	Addition to school, Knoxville, Ill.	5- 4
5- 6	School, Pittsford, Vt.	4-27
5- 6	School, Athens, Ohio	4-20
5- 6	School, Oak Harbor, Ohio	4-20
5- 8*	Addition to hospital, Ft. Totten, N. Y.	4-20
5- 8	School, Boston, Mass.	4-27
5- 8	Lodge, Tamaque, Pa.	4-27
5- 8	Hospital, Topeka, Kan.	5- 4
5- 8	School, Mountain Iron, Minn.	5- 4
5- 8	Court-house, Nowata, Okla.	5- 4
5- 8	Hospital, Vinita, Okla.	5- 4
5- 8	School, Rockford, Ill.	5- 4
5- 8	School, Marion, Ohio	5- 4
5- 9	School, Ipswich, S. Dak.	5- 4
5- 9	School, Tony, Wis.	5- 4
5- 9	Building, Grafton, N. Dak.	5- 4
5- 9	Court house, Dillon, S. C.	4-27
5- 9	Superstructure of dome, Madison, Wis.	4-27
5- 9	School, Belgrade, Minn.	4-27
5- 9	Workshop, New York, N. Y.	4-27
5- 9*	U. S. post-office, Faribault, Minn.	4- 6
5-10	U. S. post-office, court house, etc., Richmond, Va.	4-13
5-10	Buildings for hospital, Cincinnati, Ohio	4-13
5-10	Isolation hospital, Ft. Sam Houston, Tex.	4-20
5-10	Detention home, Sacramento, Cal.	4-27
5-10	Remodeling court house, Williamson, W. Va.	4-27
5-10	School, McClusky, N. Dak.	5- 4
5-10	Library bldg., Oswego, Kan.	5- 4
5-10	Edifice, Grand Ledge, Mich.	5- 4
5-10	School, Carlisle, Ky.	5- 4
5-11	School house, Stockport, Iowa	4-27
5-11	City hall, Oakland, Cal.	4-27
5-11*	U. S. post-office, Hope, Ark.	4- 6
5-12	Improvements to bldgs, Atlanta, Ga.	5- 4
5-12	School, Panora, Iowa	5- 4
5-13	School, Herman, Neb.	5- 4
5-15	Jail and sheriff's residence, Liberal, Kan.	5- 4
5-15	School, Pendleton, Ore.	4- 6
5-16	Extension and remodeling of court house, Charlestown, W. Va.	4-13
5-17	School, Forest Hill, La.	4-13
5-17*	U. S. post-office, Pana, Ill.	4-13
5-18	U. S. post-office, Coffeyville, Kan.	4-16
5-18	Laundry bldg., etc., Lisbon, Ohio (Mfg. Pl.)	5- 4
5-19*	U. S. post-office and court house, Phoenix, Ariz.	4-13
5-20	U. S. post-office, Sioux Falls, S. Dak.	4-13
5-22	U. S. post-office, Warrensburg, Mo.	4-13
5-23	U. S. post-office, Ft. Collins, Colo.	4-20
5-24	School, Waupaca, Wis.	4-20
5-24*	U. S. post-office, Greenwood, Miss.	4-20
5-25	U. S. post-office and custom-house, San Diego, Cal.	4-20
5-27	U. S. post-office, Gadsden, Ala.	4-20
5-27*	U. S. post office and custom house, Richford, Vt.	4-20
5-27	School, Kanawha, Iowa	5- 4
5-29	U.S. post-office, Dyersburg, Tenn.	4-27
5-31	U. S. post-office, Sulphur Springs, Tex.	5- 4
6- 5*	U. S. post-office, Dublin, Ga.	4-27
6- 6	Asylum, Rockport, Ind.	5- 4
6- 6	U. S. post-office, Wichita Falls, Tex.	5- 4
6- 7	Remodeling U. S. post-office, Wilmington, Del.	5- 4
6- 9	U. S. post-office, Victoria, Tex.	5- 4

Water-Works.

Bids close.		Noted in issue of
5- 5	Water-works, Bassfield, Miss.	5- 4
5- 5	Well, Monroe City, Mo.	5- 4
5- 6	Water main, Duluth, Minn.	5- 4
5- 8	Water mains, Mitchell, S. Dak.	5- 4
5- 8	Water-works, Chappell, Neb.	4-20
5- 8	Water-works equip., Sherman, Tex.	4-13
5- 5	Explosives, etc., Chicago, Ill.	4-27
5- 8	Well, etc., Chillicothe, Mo.	4-27
5- 9	Dam, Lancaster, Pa.	4-27
5- 9	Water tower, Lakewood, Ohio	4-20
5- 9	Pipe, etc., Cincinnati, Ohio	5- 4
5- 9	Pipe, etc., Portland, Ore.	5- 4
5-10	Wells, Akron, Mich.	5- 4
5-10	Filtration plant, Niles, Ohio	5- 4
5-11	Water-works apparatus, Anaheim, Cal.	5- 4
5-11*	Water main, Geneva, N. Y.	4-27
5-12	Water mains, Rockport, Ohio	4-20
5-12	Irrigation canals, Oakdale, Cal.	4-27
5-12	Meters, Minneapolis, Minn.	4-27
5-12	Canal, etc., Sterling, Colo.	5- 4
5-13*	Valves and hydrants, Sioux City, Iowa	5- 4
5-15*	Well, Tipton, Iowa	4-27
5-15*	Water-works, Penticton, B. C.	4- 6
5-15*	Water pipe, Pittsfield, Mass.	5- 4
5-15*	Dam, Holyoke, Mass.	5- 4
5-16*	Tunnel, New York	4-20
5-16*	Pumps, etc., Norfolk, Va.	4-27
5-17	Reservoir, etc., Fort Mason, Cal.	4-27
5-22	Water-works, Stanford, Ill.	5-4
5-22	Water pipe, San Diego, Cal.	5- 4
5-22	Water system, North Mankato, Minn.	5- 4
5-22	Water pipe, San Diego, Cal.	5- 4
5-23	Pipe hydrants, etc., La Crosse, Wis.	5- 4
5-25	Water main, Fort Myer, Va.	5- 4
5-29	Dam, etc., Ottawa, Ont.	5- 4
5-31	Water pipe, Burnaby, Ont.	5- 4
5-31	Pipe, Vancouver, B. C.	4- 6
6- 1*	Canal enlargement, Boise, Idaho.	3-30
6-15	Pumps, Philippine Islands (U. S. Poss.)	5- 4
6-20	Engines and pumps, India (Foreign)	4-27

Sewers.

Bids close.		Noted in issue of
5- 4	Laying sewers, Prophetstown, Ill.	5- 4
5- 4	Sewers, New Rochelle, N. Y.	5- 4
5- 5	Sewers, Austin, Minn.	5- 4
5- 5	Sewers, Cleveland, Ohio	4-27
5- 5	Sewers, South Bend, Ind.	4-27
5- 8	Sewers, Huntington, W. Va.	4-27
5- 8*	Sewers, Washington, D. C.	4-27
5- 8	Sewer, Ft. D. A. Russell, Wyo.	4-20
5- 8	Sewers, Elyria, Ohio	4-20
5- 8	Sewers, Humbolt, Kan.	4-13
5- 8	Sewer, Gilbert, Minn.	5- 4
5- 8	Sewer, Wash., D. C.	5- 4
5- 8	Sewers, Council Bluffs, Iowa	5- 4
5- 9	Sewers, Hutchinson, Kan.	5- 4
5- 9*	Laying sewer pipe, Toronto, Ont.	4-13
5-10	Sewers, Mullan, Idaho	5- 4
5-12	Sewer pipe, St. John, N. B.	5- 4
5-15*	Sewers, Fulton, N. Y.	5- 4
5-15	Sewers, North Toronto, Ont.	5- 4
5-15	Sewers, Auburn, Ind.	5- 4
5-15*	Sewers, Auburn, Ala.	5- 4
5-15	Sewers, Auburn, Neb.	5- 4
5-15	Settling tanks, etc., Batavia, N.Y.	4-13
5-15	Sewer, The Dalles, Ore.	4-13
5-15	Sewer, Edmonton, Alta.	4-27
5-15	Sewers, Aberdeen, S. Dak.	4-27
5-17	Sewers, Reedsburg, Wis.	4-27
5-17	Sewers, Antigo, Wis.	4-27
5-17	Sewers, Las Vegas, N. Mex.	5- 4
5-22	Sewer, East Youngstown, Ohio	4-27
5-23	Sewer, Muskogee, Okla.	5- 4
5-23*	Siphon, New York	5- 4
5-24	Sewers, Williamsport, Pa.	4-27
6- 1	Sewers, South Glens Falls, N. Y.	5- 4
7- 3	Sewage disposal system, San Jose, Cal.	2-23

Streets and Roads.

Bids close.		Noted in issue of
5- 4	Paving, Newark, N. J.	5- 4
5- 5	Stone pike, Findlay, Ohio	5- 4
5- 5	Paving, Duluth, Minn.	5- 4
5- 5	Paving, Akron, Ohio	5- 4
5- 5	Street work, Philadelphia, Pa.	5- 4
5- 5	Paving, Youngstown, Ohio	4-27
5- 5	Reconstructing streets, St. Louis, Mo.	4-27
5- 5	Gravel road, Brazil, Ind.	4-20
5- 5	Gravel roads, Crown Point, Ind.	4-20
5- 5	Street improvement, Cincinnati, Ohio	4-13
5- 6	Asphalt, Washington, D. C.	4-20
5- 6	Grading, etc., Chardon, Ohio	4-27
5- 6*	Paving, Washington, D. C.	4-27
5- 6	Paving, etc., Wilkinsburg, Pa.	5- 4
5- 8	Road improvement, Los Angeles, Cal.	5- 4
5- 8	Grading, Oklahoma City, Okla.	5- 4
5- 8	Paving, etc., Bloomington, Ind.	5- 4
5- 8	Paving, Elyria, Ohio	4-20
5- 8	Paving, Barnesville, Ohio	4-20
5- 9	Gravel roads, Brookville, Ind.	4-20
5- 9	Stone road improvement, Bowling Green, Ohio	4-20
5- 9	Roads, Logansport, Ind.	4-27
5- 9	Paving, Bogota, N. J.	5- 4
5- 9	Crushed gravel, Fort Wayne, Ind.	5- 4
5- 9	Regulating, etc., New York, N. Y.	5- 4
5-10	Curbs, etc., Lewiston, Idaho	5- 4
5-10	Paving, etc., New York, N. Y.	5- 4
5-10	Street improvement, Graham, N. C.	5- 4
5-10*	Paving, etc., Meadville, Pa.	5- 4
5-10	Road construction, Baltimore, Md.	4-27
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5-10	Paving, Madison, Wis.	4-27
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5-12	Paving, Jacksonville, Fla.	4-27
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5-13	Gravel road, Rushville, Ind.	4-20
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5-15	Paving, etc., Catlettsburg, Ky.	4-20
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5- 5*	Dredging, Boston, Mass.	4-27
5- 5	Street sweeping (Garbage), Akron, Ohio	5- 4
5- 6	Foundations, etc. (Garbage), Buffalo, N. Y.	5- 4
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5- 6	Dry kiln, Bremerton, Wash.	4- 6
5- 6	Repairs to ships, Norfolk, Va.	4- 6
5- 6	Ice mchy., etc., Wash., D. C.	4-27
5- 8*	Incinerator plant, Erie, Pa.	4-20
5- 8	Steel foundry equip., Panama, (U. S. Poss.)	4-27
5- 8	Fire engine, Cleveland, Ohio	5- 4
5- 8	Cement, Brookline, Mass.	5- 4
5- 8	Road oil, Hartford, Conn.	5- 4
5- 9	Steel, Washington, D. C.	5- 4
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5- 9	Wharf, Ottawa, Ont.	4-27
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5-10*	Screening bldgs., Fort Crockett, Tex.	4-20
5-10	Engineering supplies, Panama (U. S. Poss.)	4-13
5-10*	Dredging, Charleston, S. C.	4-13
5-10*	Lock and dam, Wheeling, W. Va.	4-13
5-10*	Cables, conduits, Washington, D. C.	5- 4
5-10	Ditch, Glencoe, Minn.	5- 4
5-10	Bath repairs, New York	5- 4
5-10	Pipe, etc., New York	5- 4
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5-11	Road oil, New York	5- 4
5-11	House, New York	5- 4
5-11	Garbage disposal (Garbage), New York	5- 4
5-11*	Steam roller, Grand Rapids, Mich.	5- 4
5-11*	Dredging, Wilmington, Del.	4-13
5-11*	Lock house, etc., Wheeling, W. Va.	4-13
5-11	Telephone system, Ripley, Ont.	4-20
5-11	Seawall, etc., Fort Adams, R. I.	4-27
5-12	Launch basin, etc., Fort Hamilton, N. Y.	4-20
5-12	Breakwater repairs, Boston, Mass.	4-20
5-12*	Dredging, Jacksonville, Fla.	4-13
5-12	Lumber, Jeffersonville, Ind.	5- 4
5-12	Ditch, Jackson, Minn.	5- 4
5-13	Drainage, Urbana, Ill.	5- 4
5-15	Crematory (Garbage), North Chicago, Ill.	5- 4
5-15*	Dredging, Detroit, Mich.	5- 4
5-15	Lumber, Fort Hancock, N. J.	5- 4
5-15*	Dredging, Oswego, N. Y.	4-20
5-15*	Dredging, Newport, R. I.	4-20
5-15*	Dredging, Norfolk, Va.	4-20
5-15*	Dredging, Baltimore, Md.	4-13
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5-15	Dredging, Wilmington, Del.	4-27
5-15	Canal, etc., Carrollton, Mo.	4-27
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5-18	Rope, New York	4-20
5-18*	Excavation, etc., Chicago, Ill.	4-27
5-18	Dredging, Wilmington, Del.	4-27
5-18	Steel, brass, etc., Augusta, Ga.	4-27
5-18*	Coal bunker, etc., Wash., D. C.	5- 4
5-19	Culvert pipe, Mt. Gilead, Ohio	4-27
5-19*	Dredging, New London, Conn.	4-27
5-20*	Dredging, New London, Conn.	4-27
5-20*	Jetties, etc., Washington, D. C.	4-27
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5-20	Ditches, Osceola, Wis.	5- 4
5-22	Revetment, Kansas City, Mo.	5- 4
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5-24*	Dredging, Milwaukee, Wis.	4-27
5-25*	Dredging, etc., Jacksonville, Fla.	4-27
5-25*	Dredging, Galveston, Tex.	5- 4
5-25	Garbage, Indianapolis, Ind.	5- 4
5-26*	Lock and dam, Cincinnati, Ohio	4-27
5-26	Cottages, McDowell, Ariz.	4-27
5-26	Steel and rivets, Los Angeles, Cal.	4-27
5-27	Pumping equip., Norfolk, Va.	4-27
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5-27*	Miter gate-moving machines, Panama (U. S. Poss.)	4- 6
5-27*	Bulkhead, Mobile, Ala.	5- 4
5-29	Stone, San Francisco, Cal.	4-20
5-30	Franchise, Turlock, Cal., (Elec. Ry.)	4-20
5-30	Railway construction, Scottsburg, Ind. (Elec. Rys.)	4-20
5-31*	Cement, Montgomery, Ala.	5- 4
5-31*	Dikes, Savannah, Ga.	5- 4
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6- 1*	Breakwater, Portland, Me.	5- 4
6- 1	Canal, Wilmot, Ark.	4-13
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6- 3	Locomotive, Portsmouth, N. H.	4-27
6- 3	Extension of dikes, Vallejo, Cal.	5- 4
6- 6*	Drainage canals, levees, etc., New Orleans, La.	5- 4
6- 6	Towboat, Vicksburg, Miss.	4-27
6- 7	Cable, Australia (Foreign)	4-27
6-20	Colliers and tugs, Wash., D. C.	4-27
7-22*	Harbor work, Chile (Foreign)	4-27
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8- 1	Designs, etc., for monument, Cincinnati, Ohio	2- 9

Examinations.

Examination date.		Noted in issue of
4-29	Asst. Topographer, Ottawa, Ont.	4-20
4-29	Triangulator and Compositor, Ottawa, Ont.	4-20
5- 3	Junior chemist, Wash., D. C.	3-23
5-10	Telegraph Operator, Washington, D. C.	4-20
5-24	Highway engineer, Washington, D. C.	4-20
5-24	Topographic Draftsman and Copyist, Topographical Draftsman, Washington, D. C.	4-20
5-24	Prepator, Washington, D. C.	4-20
5-24	Drainage Engineer, Wash., D. C.	4-20
5-25	Forest Pathologist, Wash., D. C.	4-20
5-24	Assistant Chemical Engineer in Forest Products, Wash., D. C.	4-20

Readers' Wants

If you are in the market for material, equipment or supplies, and fail to find it in our advertising pages, send us full particulars, and we will gladly put you in touch with the right parties.

Manufacturers of conveying, separating and elevating machinery for grain are requested to send their catalogs and as full information as possible to Mr. Charles Kerr, Santos, Estado de S. Paulo, Brazil.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogs recommended by all the principal engineering societies of the United States are: 3½ x 6 ins., 6 x 9 ins. and 9 x 12 ins.)

TRANSITS AND LEVELS.—Keuffel & Esser Co., New York and Chicago. Paper; 5¾ × 8¾ ins.; pp. 6; illustrated.

This pamphlet relates to four particular instruments, two transits and two Y-levels; one of each is specially adapted for railway work.

CEMENT MACHINERY. — Sterrit-Thomas Foundry Co., 32d and Smallman St., Pittsburg, Pa. Stiff paper; 9¼ × 6¼ ins.; pp. 16; illustrated.

Brief descriptions of rotary kilns, sand dryers, grinders and crushers are here given. The largest kiln shown is 10 ft. in diameter by 160 ft. long.

GRAPHITE PAINTS. — National Paint & Varnish Co., Cleveland, O. Paper; 6 × 9 ins.; pp. 4.

The paints are of different kinds, for bridge and structural steel work, roofing, tanks, and general ironwork. Also for metal subjected to the influence of heat, cold and acids, such as boilers, smokestacks, ice cans, piping, etc.

CONCRETE MACHINERY.—The Ohio Ceramic Engineering Co., Cleveland, Ohio. Paper; 6 × 9 ins.; pp. 16; illustrated.

Concrete mixers, buckets, carts and cars known as the "Lakewood Line" are illustrated in this catalog. The "Lakewood" mixer is a rotating cylindrical non-tilting machine, made in standard sizes of ⅓, ½, ¾ and 1 cu. yd. capacity.

INDUSTRIAL PLANTS.—Charles T. Main, Engineer, 201 Devonshire St., Boston, Mass. Board; 9 × 7½ ins.; pp. 61; illustrated.

Full-page half-tones of industrial plants installed by the publisher during the past four years are presented here. Both interior and exterior views are shown. Brief explanatory notes accompany some of the pictures.

AIR COMPRESSORS.—Thomas H. Dallett Co., Philadelphia, Pa. Bulletins 203 and 204. Paper; 6 × 9 ins.; pp. 4 and 6; illustrated.

The first of these bulletins describes belt-driven air compressors, duplex and compound, and the second describes steam-driven compressors. Special emphasis is placed upon the use of intercoolers for cooling the air between the stages.

FILING CABINETS.—Shaw-Walker Co., 371 Broadway, New York City. Stiff paper; 6 × 9 ins.; pp. 12; illustrated.

The use of vertical filing cabinets for cards, letters, circulars, catalogs, manuscripts, etc., has now become almost universal in up-to-date business offices. This catalog shows a few large installations of sectional cabinets in use in offices of many different kinds of business.

HYDRAULIC GIANTS.—Joshua Hendy Iron Works, San Francisco, Cal. Paper; 6¼ × 10¼ ins.; pp. 24; illustrated.

Interesting descriptive information, half-tone views of details and, also, half-tone views of hydraulic giants in operation are presented in this pamphlet. There are also given a few pages of "engineering data regarding hydraulic mining" and two tables showing the theoretical flow of water through nozzles.

MACHINES FOR ENGINEERING CALCULATIONS.—Felt & Tarrant Mfg. Co., Chicago. Paper; 6 × 9 ins.; pp. 18; illustrated.

This interesting pamphlet shows the advantages of the use of the "comptometer" for figuring as applied to engineering calculations. The machine will perform addition, multiplication, subtraction and division. Examples are given of the use of this machine in making estimates and calculations for bridge work, pay-rolls on construction or other work, distribution of costs of construction, records of tests, pumping station records, etc. A list is given of several railways, contractors, bridge shops, public offices, etc., using the "comptometer."

SPREADER CAR.—The O. F. Jordan Co., 352 S. Michigan Ave., Chicago. Paper; 8¾ × 5¾ ins.; pp. 16; illustrated.

The Jordan car for spreading material dumped from cars in railway and other construction work has the movements of its spreader wings controlled by pneumatic cylinders. The car and its work are described, and there are several testimonials from railway engineers, contractors and the engineers of the Panama Canal.

SPRAY NOZZLES AND STRAINERS.—Buffalo Forge Co., Buffalo, N. Y. Paper; 4¼ × 8 ins.; pp. 14; illustrated.

The nozzles give a centrifugal action which produce an atomising, so that the fineness of the spray does not depend upon the size of the orifice. They are intended for humidifying air (in mines, etc.), washing gas, cooling condensing water, and other purposes. The strainers are for use with the spray nozzles or for the protection of pumps, meters (steam, gas or water) and other apparatus.

CONCRETE VIADUCT.—The Marquette Cement Mfg. Co., Marquette Bldg., Chicago, Ill. Paper; 9 × 6 ins.; pp. 16; illustrated.

This pamphlet is devoted to a description of the Grand Ave. viaduct, at Milwaukee, Wis., with numerous illustrations. This reinforced-concrete structure is 2,080 ft. long, with ten arches, eight of which are of 145 ft. span. Some of the views show the tall towers and lines of falsework for the inclined chutes by which concrete was delivered into the forms.

SCRAPER BUCKET EXCAVATORS.—Lidgerwood Mfg. Co., Chicago. Paper; 9 × 12 ins.; pp. 74.

The greater part of this attractive publication is devoted to half-tone engravings, large and small, of the Lidgerwood-Crawford excavators in use on canal, subway, railway, levee, mining and other classes of engineering and construction work. The excavator is described, and there are a few pages devoted to hoisting engines, boilers, electric and acetylene gas headlights; also a pneumatic coal hoist for handling the fuel supply.

AIR COMPRESSORS. — Chicago Pneumatic Tool Co., Fisher Bldg., Chicago. Catalog 33. Paper; 6 × 9 ins.; pp. 96; illustrated.

The constructive features of what have been termed the "Franklin" type of air compressors are set forth in detail in this catalog. There are shown also the several sizes and arrangements with tabulated data on dimensions and performance. The final pages of the bulletin are given up to hints on installation, adjustment, care, etc., and to tables of data of use to owners of air compressors.

CONCRETE GARBAGE BOXES AND REFUSE BURNERS.—Universal Sanitary Appliance Co., 115 Dearborn St., Chicago. Paper; 3 × 5¼ ins.; pp. 8; illustrated.

These boxes are rectangular, with iron lids and iron doors on the alley side (opening through the fence). They may be single or double, the latter where ashes are required to be kept separate from garbage, and they may be surmounted by a chamber for burning paper and rubbish. A portable refuse burner is cylindrical in form, with a grate near the bottom and an ash door. This is for use at schools, hotels, parks, clubs, etc.

ICE MANUFACTURING PLANTS.—De La Vergne Machine Co., East 138th St., New York City. Paper; 8 × 10½ ins.; pp. 19; illustrated.

This is Bulletin No. 109, issued by the above mentioned manufacturers. It gives an excellent description of a modern ice-making plant using the can system. Each detail of the plant is illustrated and considered separately. A table on p. 19, giving the approximate cost of operating an ice plant, will be found of considerable value to engineers who have not had experience in this line. The table includes plants of from 5 to 100 tons capacity per 24 hours.

SEWAGE DISPOSAL AND CITY WASTE REDUCTION PLANTS.—Sanitary Engineering & Construction Co., 225 Fifth Ave., New York. Paper; 6 × 9 ins.; pp. 12; illustrated.

The company named has been organized "to operate under a license of the Welcome patents" (1908-10) in the building of works for garbage and sewage disposal "and the manufacture of fertilizer and various resulting by-products in a sanitary manner." The catalog before us, while containing reproductions of drawings for sewage-disposal works, does not give a very clear idea of the nature of the process of sewage treatment being exploited and contains no information, except general claims, as to the results which may be expected. As to garbage disposal, the pamphlet gives scarcely anything in the way of information, definite or indefinite.

DECIMAL EQUIVALENTS. — Garvin Machine Co., Spring and Varick Sts., New York City. Wall hanger. Paper, bound with metal strip at top and bottom; 25 × 25 ins.; pp. 1; illustrated.

The lower part of this wall sheet, comprising a space of 15 × 25 ins., is occupied by a table of decimal equivalents of fractions rising by 64ths from 1/64 to 1. The arrangement is such that any desired fraction can be readily located.

The upper part of the sheet bears the name of the company and half-tones of a universal milling machine and a screw machine.

INDUCTION MOTORS. — Sprague Electric Co., New York City. Bulletin 600. Paper; 8½ × 5¼ ins.; illustrated.

The line of single-phase and polyphase induction motors built by the Sprague Co. is given a general description in this bulletin. To satisfy the demand for a single-phase motor of the induction type, but having good starting torque, a combination repulsion and induction motor is shown. This evidently is built after the patents of Arnold, for it starts as an ordinary repulsion motor having the rotor windings connected to a commutator, which is later automatically short-circuited.

CONCRETE SURFACES.—The Universal Portland Cement Co., Chicago and Pittsburg. Paper; 6 × 9 ins.; pp. 32; illustrated.

This publication is of more than ordinary interest as it presents particulars of various methods of treating the surface of concrete for the purpose of giving a pleasing appearance. The methods include brushing, rubbing, tooling, sand blasting, grinding (for concrete blocks) and coloring. There are also some notes as to cost. The illustrations include half-tone engravings of structures and colored plates showing the surface of concrete made with different material.

CONTINUOUS-RAIL FROGS. — Continuous Frog & Crossing Co., Syndicate Trust Building, St. Louis, Mo. Paper; 10 × 13 ins.; pp. 8; illustrated.

The Roach device gives a continuous rail at turnouts, junctions, etc., the device making the rail continuous for whichever track the switch is set. This is accomplished without any elevation of the turnout lead rails, so that the device is considered specially adapted for main-line service under conditions of high speed and heavy traffic. It is adapted also for crossovers used at high-speed, as with a continuous rail the necessity of reducing speed is obviated.

ROCK AND ORE CRUSHERS.—Earle C. Bacon, Havemeyer Bldg., New York City. Stiff paper; 8 × 10½ ins.; pp. 80; illustrated.

The Farrel-Bacon types of crushers are illustrated and described in this catalog. All sizes of crushers from No. 1 C, size 3¾ × 2¼ ins., weighing 212 lbs., laboratory and sampling work to No. 34-B, size 60 × 42 ins., weighing 227,000 lbs., are shown. The catalog also includes various other kinds of grinding and crushing machinery, belt conveyors, screens, engines and boilers. On pages 52-62 will be found some interesting and instructive sketches showing various arrangements of crushing plants, including the crusher, conveyor, screens and bins, which will be found particularly valuable by engineers employed in this kind of work. Seventeen different installations under various conditions are here illustrated.

PORTLAND CEMENT AND ITS MANUFACTURE.—Chicago Portland Cement Co., Chicago, Ill. Paper; 6 × 9 ins.; pp. 68; illustrated.

The greater part of this pamphlet is occupied by an interesting description of the company's plant. It begins with the stripping of the soil and the drilling of the rock with churn drills, and follows the rock through the several processes of crushing, conveying, grinding, burning, packing, etc. There are numerous views of the plant and of some buildings in which the cement has been used, and also a description of the methods employed in erecting the 210-ton crusher.

WHITE PORTLAND CEMENT.—Sandusky Portland Cement Co., Sandusky, Ohio. Paper; 7 x 9 ins.; pp. 32; illusertaed.

The "Medusa White Portland Cement" is a special cement of pure white color, said to be equal in strength and other properties to the best gray Portland cement. It is intended specially for architectural construction and decorative work, for concrete building blocks, monuments, statuary, flooring, etc. Instructions are given as to its use. The greater part of the pamphlet is devoted to excellent half-tone engravings of work and structures in which this cement has been used. There are also testimonials and some reports of tests.

WATER FILTRATION AND SOFTENING.—Reisert Automatic Water [illegible] Co., 30 Church St., New York [illegible] Paper; 6 × 9 ins.; pp. 9 and 8, respectively; illustrated.

One of these pamphlets deals [illegible] with water softening apparatus in [illegible] with the Reisert-Dervaux type, [illegible] the other deals similarly with Reisert [illegible] filters. It is stated that over [illegible] Reisert water softeners and over 3,000 [illegible] filter plants have been installed in [illegible] parts of the world.

FARM TRACTORS.—Avery Co., [illegible] Ill. Paper; 9 × 8 ins.; pp. 48; illustrated.

The machine described in this [illegible] is a new type of traction engine, designed on the lines of an automobile rather than the traditional lines of the steam traction engine. It is driven by a four-cylinder, four[illegible] automobile engine, with shaft drive [illegible] selective sliding-gears, giving a variation in speeds of from 2 to 14 miles per [illegible]. The whole machine weighs, with platform and box for carrying freight, about 5,900 [illegible], and can carry a load of 3 tons. A novel type of wheel is used with the machine, having rims of cast-steel, into which are inserted two rows of hardwood plugs, 2 ins. in diameter. These make a cheap tire, which runs well on ordinary earth roads. For running over muddy roads or over soft ground, however, the wheels have a broad extension, carrying lugs which penetrate the surface of the ground to a depth of about 4 ins., and enable the wheel to secure traction without slipping. For use on city roads, the wheels can also be equipped with hard rubber tires.

COLLAPSIBLE STEEL CENTERING.—Blaw Collapsible Steel Centering Co., Pittsburg, Pa. Stiff paper; 6 × 9 ins.; pp. 1[illegible]; illustrated. Price, 50 cts.

What appears to be a carefully prepared description of the new Catskill water-supply, together with specifications for some of the aqueduct contract work, is interspersed with numerous half-tones showing the work in progress. Many, but by no means all, of the half-tones show the collapsible centering manufactured by the company which compiled and edited the pamphlet. A price has been placed upon the pamphlet to prevent abuse in the way of requests for free copies, but, as will be readily understood, the primary object of the publication is to give publicity to Blaw steel forms. The work is handsomely gotten up, and the information which it contains on the great new water-supply for New York City is not only interesting, but appears to be well worth permanent filing.

VENTILATING APPARATUS. — Hackney Ventilating Co., Prior and University Aves., St. Paul, Minn. Paper; 5 × 7 ins.; pp. 15; illustrated.

The title of this little booklet, "The Value of Ventilation," gives a very good idea of its contents. The first 4½ pages deal with the necessity of ventilation in general; lack of ventilation as a cause of colds, tuberculosis, pneumonia and other troubles, and the particular need of a constant fresh-air supply. The Hackney system of ventilation is described as consisting of two blowers of the centrifugal type, mounted on the same shaft, with an electric motor between them. One blower forces in fresh air and distributes it through pipes to all parts of the building; the other blower, through a separate system of pipes, draws out the foul air and discharges out of doors. These ventilating units are built in all sizes, from those large enough to ventilate a whole building to a very small one for attachment to one window.

DYNAMITE. — E. I. du Pont de Nemours Powder Co., Wilmington, Del. Miscellaneous publications. Paper; illustrated.

Three small bulletins of the du Pont Co. are at hand, evidently intended for popular distribution. The first one of these is entitled "Ammonia Dynamites and Their Uses." This briefly describes one type of explosive, but does not go into details at all concerning its use.

The second bulletin is entitled "A Few Pointers on Charging and Tamping Bore Holes." This is put out evidently in the attempt to educate the consumer as to what practices are considered safe. The bulletin mainly consists of extracts from "Fuel" and bulletins of the U. S. Geological Survey.

The third bulletin is entitled "Digging Ditches and Drains with Dynamite." It is stated here that dynamite digs the cleanest and most regular ditches in wet clay or gumbo. How this is done is told in 16 pages.

CURRENT PRICES OF ENGINEERING MATERIALS

Supplement to ENGINEERING NEWS, appearing in the First Issue of Each Month. New York, May 4, 1911.

PRICE CHANGES AND THE BUSINESS OUTLOOK.

The volume of business, although larger than a month ago, is not as large as a year ago. There is, however, more snap to it. Consumers are obliged to purchase, but are making very close bargains. Prices fluctuate more as they do in time of normal business and do not remain on a dead level, as they have been doing for the last eight months. Notable new low records have been made in the matter of price. Scrap iron is selling at a lower figure than any time in several years. Copper dropped below its old record, made in 1903. The price of rubber, which during 1909 and the early part of the following year buoyantly advanced to figures bearing all the ear marks of gross manipulation, has declined from the high level of $2.95 to $1.10. Exceedingly low prices have been made for fabricating steel, but steel shapes and all iron and steel products are without change.

The lower quotations brought business. More actual copper was sold in the month of April than any month since last July. The amount of fabricated work in sight is larger than any time in a year.

The improvement in the financial situation has been most marked. This applies especially to funded obligations. The New York State bonds, which a year ago were bid in by the Sinking Fund Commissioners, have steadily advanced and are now four points above the issue price. New York City bonds, which are taken as an index of municipal securities, have advanced two points. Counties, townships and municipalities which last year were unable to secure funds on anything like reasonable terms, have sold their bonds at a comparatively good price. Idle money is accumulating in all financial centers, and, while this is a clear indication of slackening trade, it also indicates that the country is saving money. With this plethora of funds, investors are reluctant to put their money in anything but first-class securities, a notable departure from the condition prevailing last year when mediocre bonds were purchased because of their high yield. The financial community is better able to withstand a storm than in several years and it has often been observed that when the financial community does set its house in order preparatory to a storm its severity is materially lessened, if not entirely mitigated.

During April more than $150,000,000 new capital was raised by American railways. In the corresponding month last year about $40,000,000 new capital was raised. The larger railways of the country are making improvements out of earnings and recent reports indicate that the better managed roads are securing control over their operating expenses in the face of much smaller gross returns.

Railroad development for the next few years will probably take the lines of intensive improvement of existing facilities rather than the construction of lines through competitive territory. Trackage rights are likely to become more common but expenditures for yard and terminal improvements will greatly increase. The agreement made regarding the Boston & Albany by the New York Central and New Haven is a case in point. This will save the duplication of a line across Massachusetts and may be an effective barrier to the contemplated line across New York State.

Labor conditions show a decided improvement. Strikes are far less numerous than a year ago, although the machinists in New York have declared for an eight-hour day and are out in many of the large shops. Many men, however, are eagerly seeking work, one of the leading transportation companies having dispensed with the services of 30,000 employees.

Economy is more likely to be practiced in the next year or two than it has been in the past few years. The building of expensive railway coaches for day travel, costly way stations and monumental terminals has used up a great deal of capital, which could have been judiciously expended in track where it would have been a source of revenue rather than an expense.

New construction includes the long discussed pressure tunnel in New York and the possibility of subway construction some time in the future. Expenditures for good roads will not be confined to the Eastern States, but will be spread all over the country, and it is probable that more money will be expended in this direction than ever before. In the South a great deal of development work is being done and quite a little railway construction. An important interurban railway is being built in North Carolina and another long one contemplated in Virginia. A construction company in New York recently secured the contract for 350 miles of railway in Haiti.

LABOR.

Wages are unchanged. Laborers for the Barge Canal have been obtained at $1.50 per day, whereas last year some difficulty was experienced in securing all the help needed at $1.65. The supply greatly exceeds the demand, particularly of rough labor. On the Ashokan Reservoir new labor has not been needed, as many of the men stayed in construction camps all winter. The season has undoubtedly been late, but even at that there is usually a more active demand April 1 than there is now on May 1. In many sections of the country where immigrant labor was imported last year, and had been the general rule for several years, the local suply will be sufficient to answer the demands this season.

The railways of the country continue to curtail their operating forces. The leading New England railway has taken off a number of trains, reduced its station help, and made cuts wherever possible. A rigid curtailment has also been made on the Pennsylvania.

The outlook for new construction is not as rosy as a month ago, and the probabilities are that construction work will be inactive during the latter part of the year, unless there should be a distinct change in the business situation.

CEMENT, LIME AND BRICK.

PORTLAND CEMENT.—The market continues an open one, and there are some irregularities in prices. For particularly large contracts, undoubtedly concessions will be made, but, as a general rule, $1.48 per bbl. is quoted in New York, subject to an allowance of 40 cts. for bags returned. This corresponds to the quotation of 80 cts. per bbl. in bulk at mill. While there will undoubtedly be a large amount of cement used, probably more than ever before, there is still room for improvement. Some of the mills are now operating to more than 75% of capacity, and although most of the Lehigh Valley mills are operating fairly satisfactory, the output there could be decidedly increased, should the necessity arise. In the Middle West the demand is good, and there, as in the East, it is expected that business will develop as the season opens. In the West, cement is selling at 95 cts. to $1.05 in bulk at the mill.

Quotations, as stated, are $1.48 per bbl. in New York, with an allowance of 40 cts. for the bags returned, although some sales have been made at $1.43, and still other selling agents are nominally quoting $1.53. In Boston, quotations are unchanged at $1.52, and business is stated to be fairly satisfactory; Buffalo, $1.50; Philadelphia, $1.40. On the Pacific coast, prices range from $2 to $2.40 per bbl. No change has been made in the price of imported cement, $2.42 being quoted for Alsen's and $2.43 for Dyckerhoff's.

NATURAL CEMENT. — Business continues quiet. Quotations are without change at 80 cts. per bbl. in New York and $1.05 in Boston.

BRICK.—Some improvement is noted in the demand, but more brick are being shipped into the New York market than are used. It is unlikely that all of the Hudson River yards will reopen this year, as some of them are so situated that it is almost impossible to make both ends meet at the current quotation.

Prices are 25 to 50 cts. a thousand higher than last month, Hudson River common selling at $5.50 to $5.75; Raritan River brick are selling at the same price. In Newark, brick from yard are unchanged at $6.75.

White enameled brick are held at the unchanged price of $60 per thousand for the American size (8¾ × 2¼-in. enameled surface by 4⅛-in. bed), and $70 to $75 for the English size (9 × 3-in. enameled surface by 4½-in. bed). These prices are f. o. b. Perth Amboy.

PLASTER BLOCKS.—For large lots, prices are as follows:

	Weight, lbs. per sq. ft.	Price, cts. per sq. ft.
2-in.	7	6
3-in.	8½	6½
4-in.	11	7¼

These blocks are made 32-in. long by 13½-in. wide, containing 3 sq. ft. of surface. The 2-in. blocks are solid, but the others are hollow.

Plaster boards, ⅝-in thick, are 16 cts. per sq. yd.

LIME.—The following prices are for lots of 500 bbls., delivered in New York City: State common, per bbl., 75 cts.; Rockland-Rockport common, 92 cts.; Rockland-Rockport special, 300 lbs., $1.37; finished, 300 lbs., $1.47; finishing 200 lbs., $1.02, and 350 lbs., $1.62; New Milford, $1.30.

STONE.

BLUESTONE.—The demand is fully up to normal, and there is some difficulty in securing the material needed.

For delivery, either alongside of dock, f. o. b. cars, New York, prices are without change as follows: Flagging, 6 cts. per sq. ft. per in. of thickness; flagging, 2½ to 3-in. thick, that will pass New York City specifications, 18 to 19 cts. per sq. ft. Sewer bottoms, 5 ft. sq. and 3-in. thick, are sold at 25 cts. per sq. ft. Curbing, 5 × 16-in., is 40 cts., and 5 × 25-in., by 5-in. thick, is 60 cts., and 6-in. thick is 65 to 70 cts. per lin. ft., 5 × 20-in. by 5-in. thick is 50 cts.

Promiscuous shapes of building and foundation stone sell at 70 to 75 cts. per cu. ft.

GRANITE.—Prices continue without change at 40 to 45 cts. per cu. ft. for promiscuous shapes or run of quarry.

Pink Milford granite is in fair demand and unchanged in price at $1 per cu. ft. for promiscuous shapes.

LIMESTONE.—Prices are unchanged at 85 cts. per cu. ft., delivered alongside of dock, New York. Dressed stone is quoted at $1.25 to $1.50 per cu. ft.

Sandstone in the rough is 80 cts. to $1 per cu. ft.

INTERIOR STONE. — Slate flooring, 1-in. thick, can be had at 20 cts. per sq. ft. for the common or ribbon variety. Clear black sells at 35 to 40 cts., and the same price is asked for Vermont. A combination of slate and marble flooring is 30 cts. per sq. ft.

Marble floor, finished ready to lay, of Vermont marble, is 50 to 70 cts. per sq. ft.; Italian marble, 70 to 90 cts. Tennessee marble can be had at 65 cts. Ordinary stair work, such as slate steps, are quoted at 24 cts. per sq. ft.

CRUSHED STONE, SAND AND GRAVEL.

CRUSHED STONE.—While there is a fair amount of activity, the season is slow, and the volume of business is not up to normal. Due to the lateness of the season and a supply in excess of the demand, prices have eased off slightly.

Revised quotations are as follows: 1½-in. stone, 85 to 95 cts. a yd.; ¾-in. stone, 90 cts. to $1 a yd.; and screenings are likewise sold at 90 cts. to $1. These prices are for full cargo lots of 500 cu. yds., delivered alongside of dock, New York City.

In Boston, stone, f. o. b. cars at point of shipment, per net ton, is quoted as follows: 2½-in. stone, 65 cts.; 1½-in., 75 cts.; ¾-in., 90 cts.

SAND. — The advantage is still with the buyer of sand, there being more sand for sale than there are buyers, and for immediate delivery, as well as shipments to July 1, 25 cts. per cu. yd., delivered alongside of dock, is quoted. Somewhat higher prices prevail on contracts running throughout the year. Delivered in Newark, sand is selling at 36 to 40 cts. per cu. yd.

White quartz sand is 60 cts. per cu. yd., and white quartz grit, 75 cts. per cu. yd. All of these prices are for delivery alongside of dock, New York, and for full cargo lots of 500 yds.

In Boston, sand sells at 35 cts. per cu. yd., to which is added the freight of about 50 cts.

GRAVEL.—While the demand is not as active as it was last summer, still it is fairly satisfactory, and buyers are specifying freely on old contracts.

Prices are unchanged at 75 to 85 cts. per cu. yd., delivered alongside of dock. These prices are for cargo lots of 500 cu. yds.

White quartz roofing gravel is $1.25 to $1.35 per cu. yd.

IRON AND STEEL.

PIG IRON.—The iron trade during April was a distinct disappointment. Few sales were made, and these were for small lots. The trade expected an improvement in business, but this did not materialize. The production during April increased about 13,000 tons daily. It is doubtful if the consuming capacity of the country is equal to the output, and the probabilities point to some blowing out of some blast furnaces. The American Locomotive Co. purchased about 10,000 tons in the East, and several sales were made to pipe manufacturers, although this trade is far less active than a year ago. In steel-making iron, there appears to be some improvement.

For lots of 100 gross tons and over, f. o. b. points named, quotations are as follows: Cincinnati Southern foundry No. 1, $14.75; Southern foundry No. 2, $14.25; Southern foundry No. 4, $13.50. In Philadelphia, Eastern Pennsylvania No. 2X foundry is $15.50 to $16.; Eastern Pennsylvania No. 2 plain foundry is $15.25 to $16. In Chicago, Northern foundry No. 2 is $15 to $15.50, a reduction of 50 cents., compared with last month, and Souhtern foundry No. 2 is $15.35 to $15.85. In Pittsburg, Bessemer iron is $15.90, and Basic, $14.65 to $14.90, an advance of 50 cts. per ton on the inside quotation. These Pittsburg quotations include the 90-ct. rate from the Valley to Pittsburg. In New York, Northern foundry No. 2X is $15.50 to $15.75; Southern foundry No. 2, $15.25 to $15.50. In Birmingham, Southern foundry No. 2 can be had for $11 for all deliveries prior to July 1, after which date $11.50 is demanded.

STEEL RAILS.—Rail contracts have been light, although recent orders include 7,500 tons for the Baltimore & Ohio; 6,000 for the Missouri, Kansas & Texas; 4,000 for the Pere Marquette. Export orders are very satisfactory. The Edgar Thompson mills of the Steel Corporation have been kept busy for the last two months on export orders. Light rails and trolley rails are likewise in good demand.

All new rails are now quoted in cents per lb., the quotations being as follows for lots of 500 tons and over: Standard sections, 50 to 100-lbs. per yard, 1.25 cts. per lb.; 40 to 45-lbs., 1.16 cts.; 30 to 35-lbs., 1.20 cts.; 16, 20 and 25 lbs., 1.21 cts.; and 12-lb. rails, 1.25 cts. Relaying rails are unchanged in New York, at $20 to $21 per gross ton. In Chicago, standard sections, subject to inspection, are $1 cheaper than last month, at $22 to $23, per gross ton.

TRACK SUPPLIES.—The demand is not quite as active as a month ago; still it is far more satisfactory than earlier in the year. The advance of 5 cts. per keg made April 1 did not bring out any new business, but prices are fairly firm at the quotation of $1.60 per 100, Pittsburg. In Chicago, quotations are unchanged at $1.65 to $1.75. The extras are unchanged and repeated from last month as follows:

Railroad Spikes.		Cents.
3, 3½, 4, 4½ and 5 × ½	Extra	.10
3½, 4 and 4½ × 7/16	Extra	.20
3, 3½, 4 and 4½ × ⅜	Extra	.30
2½ × ⅜	Extra	.40
2½, 3 and 3½ × 5/16	Extra	.60
2 × 5/16	Extra	.80
Boat Spikes.		
¾ in. square, 12 to 24 in. long	Extra	.15
⅝ in. square, 8 to 16 in. long	Extra	.15
½ in. square, 6 to 16 in. long	Extra	.15
7/16 in. square, 6 to 12 in. long	Extra	.20
⅜ in. square, 4 to 12 in. long	Extra	.30
5/16 in. square, 4 to 8 in. long	Extra	.45
¼ in. square, 4 to 8 in. long	Extra	.75
¼ in. square, 3 to 3½ in. long	Extra	1.00

Track bolts with square nuts are 2.15 to 2.25 cts. per pound base in carload lots, Chicago.

STRUCTURAL STEEL.—There is a large tonnage being placed. The low prices for fabricated work have brought out many large orders. It is estimated that the fabricators have orders on their books and prospects for 1,000,000 tons of work. This may be compared with the record-breaking output of shapes in 1909, which was 2,275,000 tons. Some of the more important contracts include the Kansas City Terminals, 250,000 tons; New York Subway and Elevated extensions, 160,000 tons; Woolworth Building, New York, 35,000 tons; Quebec Bridge, 60,000 tons; Hell Gate Bridge, 100,000 tons. There is also a great variety of small work, such as the "80 Maiden Lane Building," New York, which was awarded to the American Bridge Co.; about 1,500 tons of bridge material for the Atlantic Coast Line; 8,000 tons for the Otis Building, Chicago. These orders would be eagerly sought after even in boom times, and now, when there is steel enough and to spare, there is very lively competition. The Pennsylvania, Southern Ry., Illinois Central, Harriman Pacific, as well as the Canadian roads, are doing important work, but they are more careful not to make extravagant expenditures than before in years.

Prices are without change. The following quotations are named in cts. per lb., f. o. b. Pittsburg: I-beams and channels, 3 to 15-in., 1.40 to 1.45 cts.; over 15-in., 1.55 cts.; H-beams, over 8-in., 1.65 cts.; angles, 3 to 6-in., inclusive, 1.50 cts.; angles over 6-in., 1.55 cts.; zees, 3-in. and over, 1.50 cts.; angles, channels and zees under 3 in., 1.45 base and full extras; deck beams and bulb angles, 1.75 cts.; hand rail tees, checkered and corrugated plates, 2.75 cts.

Chicago store prices in cents per lb. are as follows: Angles, 3 to 6-in., 1.80 to 1.90 cts.; over 6-in., 1.90 to 2 cts.; I-beams and

channels, 1.80 to 1.90 cts. In San Francisco, prices from store continue without change at 2.70 cts. base.

CAST-IRON PIPE.—The largest contract taken during the month was 5,000 tons for Helena, Mont., placed in Birmingham. In the East, the most important work seems to be an order for less than 400 tons for a small Maine town. Quotations are without change from last month, as follows:

Birmingham, Ala., 4 to 6-in., $23; 8 to 12-in., $22; over 12-in., $21.

Chicago, 4-in., $25.50; 6 to 12-in., $24.50; 16-in., $24.

New York, 6-in., $21 to $22.

San Francisco, 4-in., $35; 6 to 12-in., $34.

Gas pipe is held $1 per ton higher in all markets.

OLD MATERIALS.—The scrap market is exceedingly dull. Scrap is now being shipped abroad from Maine and from all Southern points. Most of this scrap goes to Italy—the dumping-ground for low-priced scrap; but it is unusual to ship scrap from this country. As far as the Eastern dealers are concerned, they are doing practically no business. Speculators are unwilling to buy, and regular dealers have about as much scrap on hand as they can comfortably take care of.

Prices in New York per gross ton are as follows: Heavy-melting steel scrap, $10 to $10.50, a reduction of $1 from last month; No. 1 yard wrought, $10 to $12, which is $1 to $1.50 cheaper than last month; No. 1 railroad wrought, $12.50 to $13, which is $1 less than a month ago; pipes and flues, $10.25 to $10.75, representing a drop of 75 cts.; cast borings, $5 to $5.50, a reduction of $1.50; machinery cast, broken up, $11 to $11.50, which is $1 cheaper; stove plate, $8.50 to $9, which is 50 cts. cheaper than last month and $1.50 cheaper than two months ago.

In Chicago, there is scarcely enough trade to determine the real course of the market. A lot of 500 tons of car wheels only brought $13.50. The Santa Fe Railroad, which had an enormous amount of scrap on hand, has refused the offers received. Quotations in Chicago are as follows per gross ton: Rolling rails, $13.25 to $13.75; heavy-melting steel scrap, $11.50 to $12; shoveling steel, $11 to $11.50, which is a decline of 25 cts., compared with last month. For such materials as are sold by the net ton, quotations are as follows: Miscellaneous railroad wrought, $10.50 to $12; machine shop turnings, $6.50 to $7; No. 1 cast scrap, $11.50 to $12, a reduction of 25 cts.; pipes and flues, $8.25 to $8.75, a reduction of 25 cts.; railroad malleable, $11 to $11.50, a reduction of 50 cts.; agricultural malleable, $9.75 to $10.25, a reduction of 25 cts.

In the Pittsburg market, some large sales have been made by the Pennsylvania and the Baltimore & Ohio railroads. Most of this scrap went directly to consumers, and the prices were unusually low. Quotations per gross ton are as follows: Re-rolling rails, $14.50, a decline of 50 cts., compared with last month; No. 1 foundry cast, $13.75 to $14, a decline of 25 cts.; No. 2 foundry cast, $12.75 to $13, a decline of 50 cts.; old grate bars, $10.50 to $10.75, a decline of 50 cts.; car wheels, $13.50 to $13.75; bundled steel scrap, $9 to $9.50, a decline of $1.50.

PLATES.—The plate mills are still operating to about 50 to 60% of capacity. Within the last fortnight some fair orders for cars have been announced: the Pittsburg & Lake Erie Co., 2,000 gondolas; the Texas Co., 200 tank cars. There is very little shipbuilding work in sight, although some Mississippi barges for the U. S. Army Engineers will take 600 to 1,200 tons.

Prices are unchanged at 1.40 cts. base for wide plates. Plates ¾-in. thick, 6¼ to 100 ins. wide, 1.40 to 1.45 cts.; ¼ to 3/16-in. thick, 1.50 to 1.55 cts.; 3/16-in. and thinner, including No. 8 gage, 1.55 to 1.65 cts.; Nos. 8, 9 and 10 gage, 1.70 to 1.75 cts. All these prices are per lb., f. o. b. mill. In Chicago store prices are 1.85 to 1.90 cts.

RIVETS.—The market is an open one, and prices are $1.85 to $1.90, with $1.90 usually ruling.

Structural rivets, ¾-in. and larger, 1.90 cts. base; cone head boiler rivets, ¾-in. and larger, 2 cts., base; ⅝-in. and 11/16-in. take an advance of 15 cts., and ½-in. and 9/16-in. take an advance of 50 cts. Lengths shorter than 1-in. also take an advance of 50 cts. Terms are 30 days, net cash, f. o. b. mill.

ROOFING, CORRUGATED.—Trade is not at all active, and there is keen competition for orders.

Prices are unchanged, and per 100 sq. ft. of roof surface are as follows: Carloads, Pittsburg, No. 28 painted, $1.55; No. 28 galvanized, $2.75. From store, New York, No. 24 painted, $3.60; No. 24 galvanized, $4.50; No. 26 painted, $2.75; No. 26 galvanized, $3.75; No. 28 painted, $2.40; No. 28 galvanized, $3.50.

PILING, SHEET STEEL.—Prices are without change at 1.60 cts. per lb., f. o. b. Pittsburg.

STEEL CASTINGS.—Prices continue without change. Open hearth steel castings, weighing from 100 to 500 lbs., are 3½ to 5 cts. per lb. Crucible castings, weighing from 100 to 500 lbs., are 7½ to 9 cts. per lb.

CASTINGS, GRAY IRON.—The volume of business continues below normal. Building castings are to be had 1.62½ to 2 cts. per lb. depending on the size of the order and shape of the casting. Stair work is 2 to 2.50 cts. per lb. Rough castings, such as foundation pieces, sewer work, and similar heavy pieces, are 1.50 to 1.75 cts. per lb.

FREIGHT RATES.—The freight rates, on finished steel products, from the Pittsburg district, including plates, structural shapes, merchant steel and iron bars, pipe, fittings, plain and galvanized wire, nails, rivets, spikes and bolts (in kegs), black sheets (except planished), chain, etc., are as follows, in cts. per lb.: Albany, 16; Buffalo, 11; Boston, 18; Baltimore, 14½; Canandaigua, 13¼; Cleveland, 10; Columbus, 12; Cincinnati, 15; Chicago, 18; Denver, Colo., 85½; Harrisburg, 14½; Louisville, 18; New York, 16; Norfolk, 20; Philadelphia, 15; Rochester, 11½; Richmond, 20; Scranton, 15; St. Louis, 23; Washington, 14½.

SHEETS.—There contnues to be some shading of prices, and the mills are not operating to as great a percentage of maximum capacity as a month ago. The sheet trade will probably improve during the latter part of the year.

Quotations are wthout change, and f. o. b. mill in the Pittsburg district are as follows:

	Cts. per lb. Black.	Galvanized.
Nos. 10 and 11	1.85	2.20
Nos. 12, 13 and 14	1.90	2.30
Nos. 15, 16 and 17	1.95	2.45
Nos. 18, 19, 20 and 21	2.00	2.60
No. 22	2.05	2.60
Nos. 23 and 24	2.05	2.70
Nos. 25 and 26	2.15	2.90
No. 27	2.20	3.05
No. 28	2.20	3.20
No. 29	2.25	3.30
No. 30	2.25	3.50

Store prices Chicago are as follows:

	Cts. per lb. Black.	Galvanized.
No. 10	2.40	2.95
No. 12	2.40	
No. 14	2.45	
No. 16	2.55	3.05
Nos. 18 to 22	2.70	3.20
No. 24	2.75	3.30
No. 26	2.85	3.50
No. 27	2.95	3.65
No. 28	3.15	3.80
No. 30	3.35	4.25

MERCHANT PIPE.—Conditions in the pipe trade are fairly satisfactory. While the demand for large sizes has fallen off to an appreciable degree, there is plenty of work on the smaller sizes.

Discounts are unchanged as follows:

	Black.	Galvanized.
¾ to 1½-in. Butt weld	79	69
2-in. Lap weld	76	66
2½ to 4-in. Lap weld	78	66
4½ to 6-in. Lap weld	77	67
7 to 12-in.	75	59

At these discounts the net prices of pipe per ft. are as follows:

	Steel Pipe in Cts. per ft. f. o. b. Mill Black.	Galv.
¾-inch	2.43	3.58
1 -inch	3.47	5.12
1¼-inch	4.74	7.00
1½-inch	5.69	8.35
2 -inch	8.65	12.20
2½-inch	12.70	19.80
3 -inch	16.60	25.60
4 -inch	23.70	36.70
5 -inch	33.40	48.00
6 -inch	43.20	62.00
7 -inch	54.00	78.00
8 -inch	65.00	93.00
9 -inch	78.00	112.00
10 -inch	92.00	132.00
11 -inch	104.00	149.00
12 -inch	114.00	162.00

BARS AND MERCHANTS SHAPES.—Quotations from New York store are unchanged from last month as follows:

	Cts. per lb.
Refined Iron:	
1 to 1⅞-in. round and square	1.75
1½ to 4-in. × ⅜ to 1-in.	1.75
1½ to 4-in. × ¼ to 5/16	1.85
Rods—⅝ & 11/16 round & square	1.85
Angles:	
3-in. × ¼-in. and larger	2.00
3-in. × 3/16-in. and ⅛-in.	2.25
1½ to 2½-in. × ¼-in.	2.25
1½ to 2¾-in. × 3/16-in. & thicker	2.00
1 to 1¼ × 3/16-in.	2.10
⅞ × ⅛-in.	2.30
¾ × ⅛-in.	2.40
⅝ × ⅛-in.	3.45
½ × 3/32-in.	4.25
Tees:	
1-in.	2.65
1¼-in.	2.45
1½ × 2½ × ¼-in.	2.15
1½ × 2½ × 3/16	2.35
3-in. and larger	2.15
Beams	2.00
Channels, 3-in. and larger	2.00
Bonds—1½ to 6 × 3/16 to No. 8	2.30
Norway bars	3.60
Bessemer Machinery, Steel	1.90
Cast steel, base	7.00
Special cast steel, base	14.00 to 15.00

LAG SCREWS.—Quotations are without change. Cone point lag screws are sold at a discount of 75 and 10% from list. Net prices are as follows:

	Net price per 100 ¼-inch.	⅜-inch.	1-inch.
3½-inch	$1.17	$2.40	$5.00
4 -inch	1.25	2.55	5.25
4½-inch	1.33	2.70	5.50
5 -inch	1.40	2.85	5.80
6 -inch	1.58	3.20	6.40
7 -inch	1.73	3.50	7.00
8 -inch	1.82	3.85	7.60
9 -inch	2.05	4.10	8.20
10 -inch	2.25	4.45	8.75
11 -inch	2.40	4.70	8.30
12 -inch	2.60	5.00	9.90

WIRE ROPE.—Prices are unchanged. The discount to the larger trade is 42½ and 5% from list for galvanized, and 50 and 5% from list for bright. The net prices of bright wire rope are as follows:

Diameter. ins.	Price per foot Cast steel.	Crucible steel.	Plow steel.
2¾	$1.05	$1.24	$1.46
2½	.85	1.05	1.22
2	.57	.65	.76
1¾	.44	.54	.64
1½	.32	.39	.45
1¼	.23	.28	.32
1	.15	.18	.21
¾	.10	.11	.13
⅝	.07	.09	.10
½	.06	.07	.07

TIN PLATE.—A sharp slowing down in the tin plate trade is noted. This is most unusual, as April and May are among the active months in the tin plate trade. The American Sheet & Tin Plate Co. is only operating its mills four days a week, compared with practically full time a month ago.

Prices are unchanged from a month ago: Terne plates or tin-plates used for roofing purposes are sold by the box of 112 sheets. Store prices in New York are revised as follows: $8.70 per box for 20 × 28-in. I C plates with an 8-lb. coating; plates of the same size with a 15-lb. coating are $10.60; 20-lb. coating, $13.20, and 40-lb. coating, $16.70.

CHAIN.—Prices are unchanged and the following are named for cask lots of 500 lbs. to consumers. The quotations are per 100 lbs., f. o. b. Pittsburg:

Size in ins.	Proof.	BB.	BBB.
3/16	$8.10	$9.35	$9.85
¼	5.55	6.80	7.30
5/16	4.55	5.80	6.30
⅜	4.00	5.25	5.75
7/16	3.70	4.95	5.45
½ and 9/16	3.50	4.75	5.25
⅝	3.40	4.65	5.15
¾	3.30	4.55	5.05
⅞	3.20	4.45	4.95
1	3.10	4.35	4.85
1⅛ and 1¼	3.20	4.45	4.95

Prices of hand-made chains are unchanged:

Size in inches.	BBB crane chain.	BBB crane, dredge hoisting or steam shovel hoisting chain.	Special "Warwick" crane, hoisting steam shovel hoisting & dredge hoisting chain.	Special "Trident" crane, steam shovel hoisting & dredge hoisting chain.
⅝	$7.95	$8.20	$9.15	$9.15
¾	7.15	7.45	8.45	8.45
⅞	7.67	6.90	7.90	....
1	6.15	6.40	7.45	....
1⅛	5.75	5.95	6.90	....
1¼	5.65	5.90	6.85	....
1⅜ to 1⅞	5.55	5.75	6.80	....

COKE.—The production of coke is practically stationary, the output in the Upper and Lower Connellsville region being 363,000 tons weekly, compared with 360,000 tons a month ago. Prices are also practically without change. Standard coke is quoted at $1.60 to $1.65 for prompt shipment, and $1.80 to $2 per net ton at oven for delivery later in the year. A sale of 10,000 tons for May delivery was made at $1.65. Prompt shipments of 72-hr. foundry coke are obtainable at $2, while for delivery during the last half of the year, $2.25 to $2.40 per net ton at oven is demanded.

SPIRAL RIVETED PIPE.—Prices continue unchanged from the last report. The prices given below are f. o. b. factory, freight equalized with New York City, being figured at a discount of 50, 10 and 10% from list.

They are for orders amounting to about $250. For large orders of several carloads, prices are from 12½% to 20% cheaper.

Diameter in ins.	*Thickness of steel, Birmingham wire gage.	Net price per 100 ft. With bolted joints complete. Plain.	Asphalted.	Galvanized.
3	20	$21.80	$14.21	$20.70
4	18	19.76	21.48	30.74
5	18	23.40	23.70	37.14
6	16	33.05	35.76	49.73
7	16	37.58	40.76	56.82
8	16	43.17	46.80	65.00
9	16	50.06	54.10	74.22
10	14	66.42	71.08	96.15
11	14	71.20	76.57	102.24
12	14	83.75	89.15	118.32
13	14	89.67	96.55	127.98
14	14	99.14	105.51	138.85
15	14	108.05	114.89	151.92
16	14	117.53	124.82	166.58
18	12	167.43	175.95	226.44
20	12	183.79	193.30	248.39
22	12	200.48	210.64	269.21
24	12	219.92	231.07	293.99
26	10	280.26	292.41	370.78
28	10	301.32	314.89	395.37
30	10	324.81	399.15	430.64

*Made in both lighter and heavier gages at corresponding differences in price.

NAILS.—The demand is not as large as a month ago and there is considerable disappointment in the steel trade over the falling off in this branch. Wire nails in Pittsburg are sold at $1.80 base in carload lots to retailers with an advance of 10 cts. for less than carload lots. In New York, wire nails are sold from store at $2.05 per keg. The makers of cut nails have advanced prices 5 cts. per keg. Cut nails are now held at $1.70 per keg in carload lots Pittsburg, and $2.05 per keg from store New York. All of these prices are per 100 lbs.

WIRE.—The slowing down of the wire trade, such as has been observed during the last month, is unusual at this time of year. Quotations are as follows:

Carload lots, to retailers, annealed, $1.65; galvanized, $1.95. Galvanized barbed wire, to jobbers, $2.10; painted, $1.80. These prices are f. o. b. mill Pittsburg.

SWEDISH STEEL.—Business is quiet. Prices are without change. Drill steel, either round, hexagon or octagon, is 6 cts. per lb. for all sizes, ⅝ to 2 ins. For sizes 2⅛ to 3 ins., 7 cts., is quoted and 3⅛ to 4 ins. is 7½ cts.

Hollow drill rod is held at 12½ to 15 cts. for the imported.

Anvils of Swedish steel are held at 9 to 9½ cts. per lb. They weigh from 80 to 600 lbs.

SWITCH POINTS.—The following prices are named, f. o. b. mill, for switch points in lots of ten or more pair: For 60-lb. rail, 10-ft. points, $16.25; 15-ft. points, $17.50 for 70-lb. rail; 10-ft. points, $18; 15-ft. points, $25; for 80-lb. rail, 10-ft. points, $25.50; 15-ft. points, $27.75; for 90-lb. rail, 15-ft. points, $30.50; for 100-lb. rail, $33.50. All of the above are furnished with three rods, except the 10-ft. points for 60 or 70-lb. rail, which have only two.

BOLTS.—Prices are without change. The discount on common carriage bolts, to the retail trade and large consumers, is 70 and 7½% from list, on bolts [illegible] ins., and smaller. The lowest price [illegible] 5% discount for larger and longer [illegible]. Net prices are as follows:

Length in inches.	Diameter in inches— Net per 100. ⅜	[illegible]	¾
4	$0.74	[illegible]	$2.80
5	0.83	[illegible]	3.15
6	0.92	[illegible]	3.50
7	1.22	[illegible]	3.75
8	1.34	[illegible]	4.25
9	1.45	[illegible]	4.50
10	1.55	[illegible]	4.75
12	1.75	[illegible]	5.25
14	1.90	[illegible]	5.90
15	2.05	[illegible]	6.25
18	2.40	[illegible]	[illegible]
20	2.60	[illegible]	[illegible]

FROGS.—For mill shipmen[illegible] ten or more, prices are as follows: [illegible] frogs, No. 7, for 60-lb. rail, $15; f[illegible] rail, $16.50; for 80-lb. rail, $18; [illegible] frogs for 90-lb. rail, $21; for 100-[illegible], $23. Plate frogs, No. 7, riveted to [illegible] plate for 60-lb. rail, $18; for 70-lb. ra[illegible], for 80-lb. rail, $21.50. No. 8 frogs [illegible] to a ¾-in. plate for 90-lb. rail are [illegible] for 100-lb. rail, $27.50.

REINFORCING MATERIALS.

TRIANGULAR MESH.—The [illegible] and is broad, and consumers are purcha[illegible] freely. The following quotations are [illegible] the lots of the size named, f. o. b. mill [illegible] Pittsburg district:

Style No.	Cross sec. area per ft. width.	Price per 100 sq. ft. Carload lots.	Less than carloads and more than 1000 sq. ft.
4	.102	$1.03	$1.25
5	.077	.82	.99
6	.058	.65	.78
7	.041	.50	.61
23	.170	1.73	2.08
24	.142	1.48	1.80
25	.124	1.32	1.60
26	.110	1.20	1.45
27	.085	.98	1.19
28	.066	.81	.98
29	.049	.67	.81
31	.261	2.55	3.08
32	.225	2.20	2.67
33	.196	1.96	2.38
34	.146	1.51	1.82
35	.109	1.20	1.45
36	.075	.89	1.07
38	.380	3.62	4.38
39	.325	3.12	3.77
40	.283	2.74	3.30
41	.208	2.08	2.52
42	.151	1.58	1.92
43	.101	1.13	1.36

This material is made in regular widths of 18, 22, 26, 30, 34, 42, 46, 50, 54 and 58 ins. Standard lengths of rolls are 150, 300 and 600 ft. Cutting to special length is charged extra.

BARS, CONCRETE REINFORCING.—The demand for reinforcing bars is excellent. In Pittsburg the base price is unchanged at 1.40 cts. The following quotations are f. o. b. Pittsburg for carload lots:

	Cts. per lb. Plain.	*Deformed.
¾-inch and larger	1.40 to 1.50	1.45 to 1.55
⅝-inch	1.45 to 1.55	1.50 to 1.60
½-inch	1.50 to 1.60	1.55 to 1.65
⅛-inch	1.65 to 1.75	1.70 to 1.80
¼-inch	1.90 to 2.00	1.95 to 2.05

Bar from stock Pittsburg are usually cut to the required length without extra charge. Prices per lb. are as follows:

	Cts. per lb. Plain.	*Deformed.
¾-inch and larger	1.60 to 1.70	1.70 to 1.80
⅝-inch	1.65 to 1.75	1.75 to 1.85
½-inch	1.70 to 1.80	1.80 to 1.90
⅜-inch	1.85 to 1.95	1.95 to 2.05
¼-inch	2.10 to 2.20	2.20 to 2.30

*The price of deformed bars varied according to the shape and some are held much higher than these prices.

EXPANDED LATH.—Prices are unchanged. The prices for carload lots given below are f. o. b. Central Ohio:

Carload Lots. Price in cts. per sq. yd.

Gage.	Weight per sq. yd.	Black.	Painted.	Galvanized.
27	2¼ lbs.	11½	12¼	17½
26	2½ lbs.	12½	13¼	18½
25	2 lbs.	13½	14¼	19½
24	3.4 lbs.	14½	15¼	20½

Small Lots from New York Store.

Prices in cents per sq. yd.

27	13	13¾	19
26	14	14¾	20
25	15	15¾	21
24	16	16¾	22

This lath is packed 9 sheets to the bundle.

DIAMOND LATH FROM STORE.

Designation.	Gage.	Weight per sq. yd.	Price. Per sq. yd. Black, cts.
A	24	4 lbs.	20
A Special	24	4 lbs.	18
B	27	2.9 lbs.	16½
B Special	27	2.9 lbs.	15
B B	27	2.33 lbs.	14
Square Twist	24	4 lbs.	20
Diamond No. 24	..	3.75 lbs.	20
" No. 24 Special	..	3 lbs.	16½
" No. 26	..	2.66 lbs.	16½
" No. 26 Special	..	2.1 lbs.	14
Square Twist No. 27.	..	2.75 lbs.	14½

INTERLOCKING PLATES.—For interlocking steel plates, of 24 gage black steel f. o. b. mill Central Ohio, the following prices are named:

Length.	Per 100 sq. ft. Weight.	Price Flat Sheets.
Under 4 ft.	100 lbs.	$11.[illegible]
4 to 6 ft.	160 lbs.	10.[illegible]
6 to 8 ft.	160 lbs.	9.[illegible]
8 to 10 ft.	160 lbs.	9.[illegible]
10 ft.	160 lbs.	8.[illegible]

Curved sheets are held at an advance of $1 per 100 sq. ft. over flat.

EXPANDED METAL.—Quotations are without change, as follows:

Mesh.	Gage-bbs.	Designation.	Weight per sq. ft.	Sectional area per ft. width.	Price per sq. ft. in cts. Carload.	10,000 sq. ft. to carload.
½-in.	18	Standard	.74	.209	3.71	4.04
¾-in.	13	Standard	.80	.225	3.69	4.03
1½-in.	12	Standard	.70	.207	3.43	3.76
2 -in.	12	Standard	.56	.166	3.20	3.48
3 -in.	13	Standard	.28	.087	1.32	1.44
3 -in.	10	Light	.50	.148	1.55	1.69
3 -in.	10	Standard	.60	.178	1.80	1.97
3 -in.	10	Heavy	.90	.267	2.46	2.69
3 -in.	10	Ex. heavy	1.20	.356	3.18	3.47
3 -in.	6	Standard	1.38	.400	3.85	4.20
3 -in.	6	Heavy	2.07	.600	5.64	6.16
4 -in.	16	Old style	.42	.093	1.78	1.94
6 -in.	4	Standard	.84	.245	2.42	2.64
6 -in.	4	Heavy	1.26	.368	3.38	3.68

CLAY PRODUCTS.

HOLLOW TILE.—Business is satisfactory. The market is strong, and prices continue steady for hollow wall building tile, f. o. b. factory, Perth Amboy, N. J., quotations are as follows:

Size.	Price per block, in cts.
4 × 12 × 12-in.	5.25
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.9
10 × 12 × 12-in.	10.5
12 × 12 × 12-in.	12.1

Fireproofing partition blocks are unchanged as follows:

Size.	Price per block, in cts.
2 × 12 × 12-in.	4.4
3 × 12 × 12-in.	4.4
4 × 12 × 12-in.	5.
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.8

These prices are for what would be considered small orders—approximately carload lots. For quantities which exceed $1,000 worth of material concessions will be made.

DUCT TELEPHONE.—Small lots are sold at 4½ to 5 cts. per duct ft., but considerable concessions are made for desirable orders.

FLUE LINING.—Prices continue without change. The discount from list, f. o. b. mill, is 85%. Delivered in New York, in small lots, they can be had at 78%. Based on a discount of 85% at the mill, net prices are as follows:

	Weight in lbs.	Price per ft.
4½ × 8½-in.	14	$0.04¼
4½ × 13 -in.	20	.068
4½ × 18 -in.	40	.15
6 × 12 -in.	22	.075
7 × 7 -in.	15	.053
8⅛ × 8½-in.	18	.068
8½ × 13 -in.	28	.098
8½ × 18 -in.	45	.135
12 × 16 -in.	45	.15
13 × 13 -in.	38	.128
13 × 18 -in.	57	.18
14 × 16 -in.	60	.165
16 × 16 -in.	65	.24
16 × 20 -in.	80	.30
18 × 20 -in.	75	.30

SEWER PIPE.—The demand is good, particularly in the Middle West. In the East, there has lately been more activity.

The discounts applying to the Eastern List are as follows: For all sizes up to and including 24-in., 85% discount; for 27 and 30-in., 78% discount; for 33 and 36-in., 72% discount. These are without change from last month, except for 27 and 30-in.

At these discounts, the net prices per ft. for carload lots, f. o. b. factory, are as follows:

3-in.	$0.03
4-in.	.0375
5-in.	.045
6-in.	.06
8-in.	.082
10-in.	.12
12-in.	.15
15-in.	.202
18-in.	.285
20-in.	.336
21-in.	.405
22-in.	.45
24-in.	.486
27-in.	.99
30-in.	1.10
33-in.	1.75
36-in.	1.96

ROOFING TILE.—Prices are steady, and continue without change. The best grade of promenade roofing tile in flat blocks for high-grade roofs is sold at $20 per M. for run of kiln, and $30 per M. for selected. A cheaper form of tile with a smooth surface can be had at $10 to $12, but it is not suitable for roof gardens. These prices are for 9 × 9-in. blocks, f. o. b. factory. It requires 258 blocks to lay 100 sq. ft. of roof surface, and, in consequence, the price per 100 sq. ft. of roof surface would be $4 to $5 for the smooth blocks; $7.82 for run of the kiln, and $10.73 for the selected.

Vitrified tile, unglazed, of the French or Spanish type, is sold at approximately $8.50 per 100 sq. ft. of roof surface, f. o. b. factory. Glass tiles are sold at 60 cts. each. It requires 183 of these for 100 sq. ft. of roofing.

MILL SUPPLIES.

SHAFTING.—Business is not satisfactory. New orders are few, and specifications against contracts are not coming in in the expected volume.

Discounts are unchanged from last month, at 57% off list for carload lots. Small lots are obtainable at 52% off, and delivery is allowed in base territory.

The following net prices per ft. are based on the 52% discount: ¾-in., 4 cts.; 1-in., 7 cts.; 1¼-in., 10.90 cts.; 1½-in., 14.20 cts.; 1¾-in., 19.10 cts.; 2-in., 25.50 cts.; 2¼-in., 32.50 cts.; 2½-in., 40 cts.; 2¾-in., 48.50 cts.; 3-in., 58 cts.; 3½-in., 85 cts.; 4-in., $1.08; 4½-in., $1.70; 5-in., $2.26; 5½-in., $2.90; 6-in., $3.70.

BELTING.—Leather belting is in fair demand, but the price reduction noted last month did not stimulate business. The discounts are unchanged, as follows: Extra heavy, 60%; heavy, 60 and 5%; medium, 70%; light, 70 and 5%; standard, 70 and 10%.

Rubber belting is, in some quarters, slightly easier, due to lower price for rubber. It would not be surprising, in view of the great decline in rubber, if lower prices should be named on this kind of belting. The general asking prices are unchanged; the discounts being as follows: 40% discount from list being named for the best grade; 40 and 10% for standard, and 60 and 10% for competition.

The following net prices per ft. of rubber belting are computed at the above discounts. The price of leather belting is, as stated, unchanged from last month, and the prices may be found on page 171 of issue of April 6.

RUBBER BELTING, NET PRICE PER FT.

Width, inches.	2-ply.	4-ply.	6-ply.	8-ply.
3	$0.16	$0.22	$0.33	....
4	.21	.30	.45	....
5	.26	.44	.55	....
6	.30	.51	.65	$0.87
7	.36	.55	.75	1.01
8	.40	.57	.87	1.15
9	.46	.64	.96	1.30
10	.51	.72	1.01	1.44
12	.60	.86	1.30	1.70
14	.72	1.01	1.53	2.01
16	.83	1.17	1.76	2.35
18	.93	1.34	2.00	2.65
20	1.04	1.49	2.25	2.98
22	1.17	1.67	2.50	3.33
24	1.30	1.85	2.76	3.70
26	1.42	2.04	3.06	4.08
28	1.58	2.22	3.33	4.45
30	1.69	2.40	3.60	4.80
34	1.94	2.79	4.16	5.54
38	2.22	3.15	4.70	6.30
42	2.46	3.50	5.30	7.00
46	2.75	3.88	5.80	7.72
50	3.02	4.25	6.40	8.50
56	3.40	4.80	7.20	9.60
60	3.67	5.20	7.80	10.40

CHAIN BELTING.—Trade is satisfactory. Prices continue unchanged.

From 3 HP. to 10 HP. 30-in. centers complete, with two sprockets, $7 to $8 per HP.; from 10 HP. to 25 HP., 36-in. centers complete, $5 to $6 per HP.; from 25 HP. to 100 HP., 60-in., centers complete, $4 to $5 per HP.; from 100 HP. to 500 HP., 72-in. centers complete, $3 to $4 per HP.

PACKING.—Prices continue without change. The following quotations are for small lots in original packages:

Asbestos wick and rope, 13 cts.; sheet rubber, 11 to 13 cts.; pure gum rubber, 40 to 45 cts.; red sheet, 40 to 50 cts. Cotton packing can be had at 16 to 25 cts.; jute at 3¼ to 3½ cts., and Russian at 9 to 10 cts.

LUBRICATING OILS.—Quotations continue without change, the following figures being named for 5-bbl. lots:

	Cts. per gal.
*Cylinder, dark	20 to 27
*Cylinder, steam, refined	14 to 22
Neutral Oils, filtered:	
Stainless white, 32 to 34 gravity	28 to 29
Lemons, 33 to 34 gravity	17 to 19
Dark, 32 gravity	15 to 18
Crank Cast Oil	15 to 17

*Prices are according to test.

HIGH-SPEED STEEL.—There is a very fair demand for all kinds of high-speed steel. Prices are without change at 50 to 75 cts. per lb.

FIRE HOSE.—Prices of hose are unchanged. The standard grade of underwriters' cotton rubber-lined hose, 2⅝-in diameter, warranted, 350 lbs. pressure, is sold in 50-ft. lengths, complete with couplings, at 65 cts. per ft. Common hose, 2½-in. diameter, tested to 200 lbs. pressure, is 35 cts. per ft.

COTTON WASTE.—The following prices are named on cotton waste in bales of 100 to 500 lbs:

No. 1 White Picked Cotton Waste, 9¾ cts. per lb. No. 3 is 8⅞ cts. No. 1 Colored, 6½ cts.; No. 3 Colored is 5½ cts.

LUMBER.

Trade continues dull, and many dealers who have been waiting a better market almost despair of price improvement. The output has been restricted, and this will have its effect on prices at a later date. The Bureau of Forestry of New York State figures the production of lumber in 1910 at 519,000,000 ft., B. M.; in 1909 it was 681,000,000 ft., B. M.; and in 1908, 781,000,000 ft., B. M.

CROSS TIES.—The following prices, quoted f. o. b. New York by G. S. Baxter Co., 15 William St., New York City, are unchanged from last month as follows:

	Cents each.
7 × 9-in. by 8 ft. 6-in.	75
6 × 9-in. by 8 ft. ....nominal	72
6 × 8-in. by 8 ft.	67

Second-class, sound and square edge, are quoted as follows:

	Cents each.
7 × 9-in. by 8 ft.	61
6 × 9-in. by 8 ft. ....nominal	51
6 × 8-in. by 8 ft. ....nominal	45

HEMLOCK.—Prices are lower, and delivered in New York, hemlock from Pennsylvania can be had at $20.50 to $21; from West Virginia, the quotation is $20 to $20.50.

The following prices are ruling in New York, and are 50 cts. lower than a month ago:

Price Per Thousand, f. o. b cars, New York.

Size.	Length 10 ft.	12 ft.	14 ft.	16 ft.
2 × 4-in.	$22.50	$20.50	$20.50	$22.50
2 × 6-in. to 2 × 10-in	20.50	20.50	20.50	17.50 to 18.50
3 × 4-in. to 12 × 12-in	21.00	21.00	21.50	18.50 to 19.50
1 × 8-in.	....	17.50	17.50	17.50
1 × 10-in. and 1 × 12-in.	....	18.00	18.00	18.00

LONG LEAF YELLOW PINE.—The demand is only fair. Prices continue unchanged, and for delivery from yard in New York and vicinity, for material classed as "Merchandise" under the 1905 rules of the Association, prices are as follows:

Prices Per Thousand Feet in Yard, New York.

	Length 20 ft. base;	21 to 25 ft.	26 to 30 ft.	31 to 35 ft.
2 in. wide and under by 8 in. thick and under	$31	$32	$33	$34
10 in. wide by 10 in. thick and under	33	34	35	36
12 in. wide by 12 in. thick and under	36	37	38	39
14 in. wide by 14 in. thick and under	43	44	46	46
16 in. wide by 16 in. thick and under	45	46	47	48

For pieces longer than 35 ft. and less than 40 ft., add from $4 to $8 to base price.

LATH.—The price of lath is a little firmer than a month ago in Boston; 1⅝-in. sells at $3.70 to $3.75, and 1½-in. at $3.45 to $3.50.

SPRUCE.—Some sellers in Boston are asking $24, but most of them are willing to take $23.50 for building orders.

OILS AND PAINTS.

PETROLEUM PRODUCTS.—The demand is active, crude petroleum being in larger requisition than for some time past. Quotations are without change.

The Standard Oil Co. quotes the prices of crude oil in bbls. at the wells as follows: Pennsylvania, Second Sand, and Tiona, $1.30; Mercer black is 87 cts.; Corning, 77 cts.; New Castle, 84 cts.; Illinois, 60 cts.; Illinois heavy, below 30 gravity, 52 cts.; Kansas heavy, 30 cts.

In the New York market petroleum from tank wagon is unchanged at 6 cts. per gal.

Auto naphtha is ½ ct. cheaper at 13¼ cts., but stove gasoline is unchanged at 13¾ cts.

Fuel oil is 90 cts. to $1 per bbl.

LINSEED OIL.—While prices are practically the same as a month ago, no improvement has been shown in the demand for oil and buyers are holding off as long as possible. The paint trade has been unusually dull and painting operations have been postponed not only because of the high price of oil, but on account of the slowing down in business. The price of flaxseed is unchanged, being quoted at $2.47 in Duluth, but the September option, although nominal, is $2.05.

Raw linseed oil is now selling at 92 to 93 cts. per gal, in 5 bbl. lots. Boiled oil is held at an advance of 1 ct. per gal. over raw.

SPIRITS TURPENTINE.—The bottom dropped out of the market with a surprising suddenness. A month ago sales were being made at $1.10 and, in the South especially, the turpentine men predicted even higher quotations. Now spirits can be had at 78 cts. per gal. in New York City for 5 bbl. lots. Even this price is high, and it is well to recall that 40 to 60 cts. per gal. has been the normal range of prices for a long period of years and the probabilities are that, before many months have elapsed, the present quotation of 74 cts. will look high. In Charlestown, S. C., the price is 74½ cts.; in Savannah, 74 cts. and in Wilmington, N. C., 73½ cts.

PAINTS.—The demand is good for all kinds of paints. Prices of white lead in oil are unchanged. For lots of 500 lbs. or over, in 250 and 500-lb. kegs, 7½ cts. per lb. is quoted; in 25 and 50-lb. kegs, 7¾ cts. is quoted. Red lead and litharge in bbls., half bbls. and 100-lb. kegs, is 8 cts. per lb.

Graphite paint is moving slowly. The best grades of graphite paint in linseed oil can be purchased at $1.40 per gal.

Hydrox preservative paint is 75 cts. per gal. in bbl. lots, New York City.

Colors in oil are quoted at the following prices per lb.; Lamp black, 12 to 14 cts.; Chinese blue, 36 to 46 cts.; Prussian blue, 32 to 36 cts.; Van Dyke brown, 11 to 14 cts.; Chrome green, 12 to 16 cts.; Raw or Burnt Sienna, 12 to 15 cts.; Raw or Burnt Umber, 11 to 14 cts.

LINE CONSTRUCTION.

ALUMINUM WIRE.—The demand is limited and prices are without change at 31 cts. base.

POLES.—Cedar poles are quoted as follows by the R. D. Dowie Pole Co., New York Block, Seattle, Wash. The price is f. o. b loading point:

Length in ft.	Diameter at top. 8-in.	9-in.
30	$2.70	....
35	3.15	$3.50
40	3.60	4.00
45	...	4.50
50	...	5.00
55	...	5.50
60	...	7.20
65	...	9.75
70	...	10.50
75	...	11.25
80	...	12.00

The prices of 30 and 35-ft. poles with a 7-in. top are 25 cts higher. Otherwise chestnut poles, f. o. b Mechanicsville, N. Y., are quoted by T. C. Luther of that place as follows:

Length in feet.	Price each. Diameter at top. 5-in.	6-in.	7-in.
25	$1.50	$2.00	$2.75
30	2.50	2.75	3.50
35	2.75	3.25	4.25
40	3.25	4.00	5.50
45	4.00	5.50	7.50
50	5.50	7.50	9.50

FIR CROSS ARMS.—Prices are unchanged as follows:

Length. Size, 3¼ × 4¼-in.	Price per arm in cts. Pacific Coast.	Chicago.	New York.
3 ft., 2-pin	8	13½	15½
4 ft., 2-pin	11	18½	21
5 ft., 4-pin	16	26½	28½
6 ft., 4 and 6-pin	20½	31½	36
8 ft., 6 and 8-pin	28	43	48½
10 ft., 8, 10 and 12 pin	37	55½	67½

TELEGRAPH WIRE.—For lots of fair size, the wire measured in Birmingham wire gage, the prices in cts. per lb. are as follows: "Extra Best Best," Nos. 6 to 9, 4⅜ cts.; Nos. 10 and 11, 4½ cts.; No. 12, 4⅝ cts.; No. 14, 5⅛ cts. "Best Best," Nos. 6 to 9, 3½ cts.; Nos. 10 and 11, 3⅝ cts.; No. 12, 3½ cts.; No. 14, 4 cts. Actual freight is allowed from Trenton, N. J., where it does not exceed 25 cts. per 100 lbs.

INSULATORS.—Prices are without change. Glass insulators in lots of more than 1,000 and less than 10,000 are sold at the following prices per 1,000: Double petticoat, 20 oz., $33; Western Union, $30.25; No. 2 cable, $53.90; No. 4 cable, $210; Muncie type, 7-in., $236.50; No. 3 triple petticoat, 4½-in., $90.75.

COPPER WIRE.—The large business that has been transacted in wire for the last three months continues. Prices have been low, and some very large orders were booked. The lowest price reached was 12⅞ cts. base, and the market has now advanced to 13¼ cts.

CHEMICALS.

	Cts. per lb.
Nitric acid, 30°	3.87½ to 4.25
Nitric acid, 40°	4.50 to 4.87½
Sulphuric, 60°	0.90 to 1.00
Sulphuric, 66°	1.00 to 1.25
Sal Ammoniac, lump	9.25 to 9.75
Sal Ammoniac, granulated	5.87½ to 6.00
Sal Ammoniac, gray	6.00 to 6.25
Sulphur, roll	1.85 to 2.15
Sulphur, flour	2.00 to 2.40
Sulphur, flowers	2.20 to 2.60
	Per gallon.
Alcohol, grain, U. S. proof	$2.54 to $2.57
Alcohol, denatured, 5-bbl lots	.41 to .42
Alcohol, denatured, ½ bbls	.46 to .47
Alcohol, wood, 95 to 97	.52 to .57
Alcohol, wood, purified	.80 to ..

METALS.

COPPER.—The proper kind of an inducement was offered by sellers of copper, and it brought business. There has been more copper sold in the last month than any corresponding time in a year, and consumers are still buying. European interests have taken enormous quantities of metal, and several blocks of electrolytic, ranging in size from 400,000 to 1,000,000 lbs., were disposed of at 11.92½ cts. This constitutes a new low record, being the lowest price named for copper since December, 1902, and, with the exception of that year, the lowest price since 1898. Another sale of 750,000 lbs. was taken at 12 cts., and still another lot of 500,000 lbs. at 12½ cts. Some of these sales were made by brokers, and after this metal was out of the way the market was stronger, and electrolytic is now quoted at 12.12½ cts., while Lake, which only sold as low as 12.30 cts., is now back to 12.37½ cts. European interest took large amounts, and the London market advanced on the announcement of this buying. It has been known for several weeks that the drawers of wire have bought freely, and much wire has gone into actual consumption. The difference between the cost of copper wire, with copper at around 12½ cts., and iron wire for telegraph and telephone uses, is almost negligible, when all costs are considered. In this connection it should be remembered that the telephone companies have been in a strong financial position for some time and have been able to make extensions without regard to the money markets. The telegraph companies have in the last two years greatly strengthened their financial position, and have been in shape to buy copper wire when needed. It has been the announced policy of the Western Union for some months past to make all improvements and extensions in the wire service of copper.

The sheet trade is not as active as it was, nor have the brass mills bought as freely. Consumption in Europe continues very large, and the exports from American ports for the month of April bid fair to exceed 30,000 tons.

The copper producers have not reached fair sailing yet, but they have found out by actual experience that low prices will bring business. They may learn, too, that low prices will restrict consumption and so bring about a healthier market; but the selling end of the copper trade has not been noted for its sagacity like that displayed in the metallurgical end. Had the metallurgical end been managed as poorly the last three years as the selling end, bankruptcy would have stared more than one company in the face.

PIG TIN.—The price of tin continues to advance, but the market is more normal. Prices in America are on a parity with those abroad, and the premiums which were demanded for spot tin two months ago have entirely disappeared. Toward the latter part of the month, prices advanced on reports that the shipments from the Straits during April would be small, some estimates being as low as 3,000 tons. One factor which must be taken into consideration in the pig tin market is that the tin plate mills in this

country are not nearly as active as they were a month ago, and, too, there are many diversified uses for pig tin which call for a large quantity of metal in the aggregate where other substitutes would be used should the prices advance much farther. It is comparatively easy to talk of tin at 50 or 60 cents, but to get consumers to buy it at that level would be an entirely different proposition. Of course, with the limited amount of metal that is available for consumption, it is conceivable that the price might rise to hitherto unknown heights, yet in the world's markets such conditions have been rare indeed. Keen observers point out that whenever new supplies were needed in the world's markets, they were forthcoming. To witness examples in this country, one only has to point to the discovery of the Mesaba ore ranges, the California petroleum deposits and the timber of the Northwest. Tin is now selling at approximately 42.50 cts. per lb. in 5-ton lots, New York.

SPELTER.—Prices are lower, and the market is dull. The galvanizing interests are not buying anyway near the quantities that they did earlier in the year, and the selling to the brass trade is reported less. Sales are now being made at 5.50 cts., New York, compared with 5.65 cts. a month ago. In St. Louis, spelter is selling at 5.35 cts. At these figures, spelter is not cheap. While it is true the high price of 7 cts. was touched in the boom of 1907, this was a momentary flurry, and the reduction in the price since that time has only been about 20%, while the price of copper has been cut in two and that of lead reduced fully 30%. There is no doubt, however, that the spelter interests are working more in harmony than either the lead or copper interests, and there is no large accumulation of spelter anywhere.

LEAD.—The larger sellers of lead are able to make the price, but they cannot induce consumers to purchase at that figure. Independent sellers have been taking the bulk of the business at approximately 4.42½ cts., New York, and 4.27½ cts., St. Louis. The quotation of the leading selling interest is unchanged at 4.50 cts., New York, and this quotation has been from 5 to 7½ points higher than that of the outsiders for several months.

	Per lb.
Sheet Lead:	
Large lots	6.25 cts.
Small lots	6.75 cts.
Lead Pipe:	
Large lots	5.75 cts.
Small lots	6.40 cts.

MISCELLANEOUS METALS.—Small lots of metal and metal products can be obtained from jobbers' stores, New York, at the following prices:

	Per lb.
Bismuth	$2.25
Brass tubes, iron pipe sizes:	
½-in.	.19
¾ to 3-in.	.18
3½-in.	.19
4-in.	.20
Brass, sheets	.14¼
Brass, rods	.14¼
Solder, ½ and ½ guaranteed	.27½
Zinc, sheets	.08½
Manganese bronze rods	.16
Manganese bronze in crucible form	.14
Monel metal, ingot	.16

OLD METALS.—Miscellaneous lots of scrap metal, amounting to about a ton, can be sold to dealers in New York at about the following prices:

	Cents.
Copper, heavy and crucible	10.75 to 11.00
Copper, heavy and wire	10.50 to 10.75
Copper, light and bottoms	9.50 to 9.75
Brass, heavy	7.00 to 7.25
Brass, light	5.50 to 5.75
Heavy machine composition	9.25 to 9.50
Clean brass turnings	7.00 to 7.25
Composition turnings	8.25 to 8.50
Lead, heavy	3.75
Lead, tea	3.50
Zinc, scrap	4.00

MISCELLANEOUS.

ROOFING SLATE.—There is no especial activity, and prices continue without change. Quotations are named per "square" or 100 sq. ft. of roof surface in carload lots of the sizes in most general use, f. o. b. quarry station:

	Price per 100 sq. ft.
Vermont, sea green	$3.50 to $4.10
Pennsylvania, Bangor Ribbon	3.50 to 4.00
Maine, Brownsville No. 1	5.00 to 7.75
Maine, Brownsville No. 2	4.50 to 6.00
No. 1 Red	10.50 to 12.00
Unfading green	4.00 to 5.50
Genuine Bangor	4.00 to 6.50
Pen Argyle	4.00 to 5.50

ROPE.—The market is steady, but the demand is small. Prices are without change: Pure Manila is 8½ to 9 cts. per lb.; second grade, 7½ to 8 cts.; hardware grades, 7 to 7½cts. per lb. Pure Sisal is 6½ cts. for the highest grades, and 6 cts. for less desirable grades. Jute rope in commercial sizes is 6 to 6½ cts. per lb.

WATERPROOFING.—The prices for carload lots, f. o. b. cars New York, are as follows: Hydrex waterproofing felt, $1.25 per 100 sq. ft.; Hydrex compound "A," 26 cts. per gal.; Hydrex compound "B," 18 cts. per gallon.

Texaco waterproofing cement is $30 per ton in car lots, f. o. b. cars New York or Philadelphia.

Asphaltum for waterproofing is sold at $25 to $27 per net ton.

Glidden, graphite acid proof coating is sold at $1.25 per gal. in bbl. and ½ bbls., and $1.40 per gal. in 5-gal. cans. These prices are f. o. b. Cleveland or for delivery from warehouse, New York, Chicago, St. Louis, Boston or Atlanta.

Portland cement waterproofing by the McCormick Process is sold by the makers, McCormick Portland Cement Co., at 7 cts. per lb., delivered at the nearest railroad station, subject to the following discounts: Less than ton lots, 2%; less than five tons, 5%; less than ten tons, 5 and 2%; less than 20 tons, 5 and 5%; less than 30 tons, 5 and 7½%.

ROOFING CEMENT.—Prices are unchanged at $25 per ton for Texaco.

ASBESTOS.—Asbestos building felt and sheathing in less than ton lots is 3½ cts. per lb. for the light, weighing from 6 to 30 lbs. per 100 sq. ft.; 4 cts. per lb. is charged for the heavy weighing from 45 to 56 lbs. per 100 sq. ft.

Millboard is made in standard sheets, 40 × 40 ins., and 41 × 40 ins. It varies in thickness from 1/32 to ½-in. and in weight from 2 to 27 lbs. per sheet. The net price in 100 lb. lots is 5 cts. per lb.

Transite, asbestos wood, used for fireproofing, ventilators and smoke jacks, comes in standard sheets, 36 × 48 ins., 42 × 48 ins., and 42 × 96 ins. The prices, f. o. b. factory, Nassau, N. H., are as follows:

Thickness.	Weight.	Price.
⅛-inch	1 lb.	$0.08
3/16-inch	1½ lbs.	.12
¼-inch	2 lbs.	.16
5/16-inch	2½ lbs.	.20
⅜-inch	3 lbs.	.28
7/16-inch	3½ lbs.	.28
½-inch	5 lbs.	.32
9/16-inch	4½ lbs.	.36
⅝-inch	5 lbs.	.40
¾-inch	6 lbs.	.44
⅞-inch	7 lbs.	.48
1 -inch	8 lbs.	.52
1¼-inch	10 lbs.	.56
1½-inch	12 lbs.	.64
1¾-inch	16 lbs.	.72
2 -inch	16 lbs.	.80

EXPLOSIVES.—Dynamite of the kind usually used by contractors is approximately 11 to 13 cts. per lb., f. o. b. factory, in ton lots. Blasting powder, classified as "soda" grade, is sold at $1 20 to $[illegible] per keg of 25 lbs. in lots of 10,000 lbs. [illegible] following prices prevail on Trojan [illegible] carload lots, minimum 24,000 lbs., f. o. [illegible] Pacific Coast points: No. 1, 13½ cts.; N[illegible] 10½ cts.; No. 3, 10 cts. They have a [illegible] explosive force equivalent to 60%, 40% and [illegible] of nitroglycerine.

Exploders, per hundred, [illegible] at the following prices: 4 ft., $3.[illegible] [illegible] $4.10; 8 ft., $4.60; 10 ft., $5.10; [illegible] $5.60; 16 ft., $6.60; 20 ft., $7.50; 20 [illegible] 30 ft., $12; 36 ft., $14.60.

Caps in lots of 10,000 are [illegible] $8 per thousand.

Blasting machines for 10 [illegible] are $12; 25 holes, $20; 50 holes, $40; [illegible] $60.

PAPER.—Prices are without [illegible] from last month, as follows:

Tarred Paper:	Per roll of [illegible] sq. ft.
Standard, 2-ply, 40 lbs.	$0.45
Extra heavy, 2-ply, 45 lbs.	.55
Standard, 3-ply, 60 lbs.	.65
Extra heavy, 3-ply, 70 lbs.	.75

Rosin, Sized Sheathing:	Per roll of [illegible] sq. ft.
Light, 35 lbs.	$0.38
Medium, 30 lbs.	.45
Heavy, 40 lbs.	.60

LIGHTERAGE LIMITS.—The [illegible] delivery or "Lighterage Limits" in New [York] City are as follows: in Manhattan, f[rom] a point opposite the Fort Lee ferry, along the Hudson River around the Battery and north along the East and Harlem Rivers to the Jerome Ave. Bridge at 155th St. In New Jersey, south from Fort Lee Ferry to Bayonne City, points on the north and east shore at Staten Island, between Bridge [illegible] (Arlington) and Clifton, both inclusive, and including Elm Park, Eristina and Shooters Island. In Brooklyn, from 69th [St.], Bay Ridge, north to Port Cove, Astoria, Long Island City.

RUBBER.—Lower prices have been named for rubber in the last fortnight than any time since September, 1908. Up-River Para, fine, sold as low as $1.12 a lb., although it has since advanced to $1.20. A year ago, however, this grade of rubber was selling around $2.95 per lb., and a month ago it sold at $1.35 per lb. Up-River Para, coarse, is selling at 90 cts. a lb., compared with $1.10 a month ago, while Caucho Ball is at the same price of 90 cts. Guayule can be had at 60 cts. per lb. The enormous demand of the automobile interest apparently has been satisfied for the time being, and more reasonable prices may be expected.

For other Proposal Advertisements see pages 57, 58, 60, 61, 62 of Advertisements and Construction News page 222.

SECRETARY'S OFFICE, DEPARTMENT OF THE INTERIOR, Washington, D. C., May 3, 1911.—Sealed proposals, in duplicate, will be received at this Department until 2 o'clock p. m., Thursday, May 18, 1911, for the erection and completion of a concrete coal bunker and conveyor machinery for the central heating and lighting plant at the Freedmen's Hospital and Howard University, Washington, D. C., in accordance with the specifications and drawings, copies of which may be obtained upon application to the Chief Clerk of the Department. CARMI A. THOMPSON, Assistant Secretary.

RESURFACING.

Altoona, Pa.

Sealed proposals will be received by the Board of Public Works, of the City of Altoona, Pa., and publicly opened at 3 o'clock, Friday afternoon, May 12th, 1911, for resurfacing the following highways in the City of Altoona, Pa.:

Old Paving.	Location.	Sq. Yds.
Sheet *)	6th Avenue, 2- 4 Str.	2,100
Sheet	6th Avenue, 4-12 Str.	10,490
Sheet *)	6th Avenue, 12-15 Str.	3,370
Sheet	7th Avenue, 2-17 Str.	20,160
Sheet *)	8th Avenue, 7-15 Str.	8,210
Block *)	8th Avenue, 15-17 Str.	1,160
Block	8th Avenue, 17-24 Str.	8,880
Brick *)	9th Street, 11-Howard	2,100
Sheet	10th Alley, 14-15 Str.	760
Sheet *)	11th Avenue, 11-13 Str.	2,240
Block *)	11th Street, 11-Chestnut	1,240
Block	11th Alley, 11-12 Str.	700
Sheet *)	12th Avenue, 11-12 Str.	1,000
Sheet *)	12th Avenue, 13-15 Str.	2,580
Sheet	13th Avenue, 11-12 Str.	1,330
Sheet	14th Street, 10-11 Ave.	830
Sheet *)	Broad Avenue, Union-27	8,480
Block *)	Chestnut Ave., 7-11 Str.	3,660
Sheet	Margaret Ave., 17-Union	3,300
Brick *)	Union, Culvert-Broad	2,680

Note: In the column headed Old Paving, Sheet indicates Sheet Asphalt. Block indicates Asphalt Block, and Brick indicates Brick Paving. The *) indicates streets occupied by street car tracks.

All bids must be strictly in accordance with instructions to bidders and specifications, which may be examined at the office of the City Engineer, and upon blanks furnished for that purpose by the City Engineer, and be accompanied by a certified check for five (5) per cent. of the bidding price, or the same amount in cash, to guarantee the signing of the contract, or contracts and the furnishing of required bonds, if contracts be awarded to the bidder.

Bids to be addressed to "President, Board of Public Works," and marked "Proposals for Resurfacing," and must reach the City Engineer's office before 3 o'clock Friday afternoon, May 12th, 1911.

The Board reserves the right to reject any or all bids.

W. M. C. CRAINE, President;
WM. T. McCONNELL,
HARRY E. GAMBLE,
Board of Public Works.

CONCRETE DAM.

Holyoke, Mass.

Sealed proposals will be received at the office of the Water Commissioners, City Hall, Holyoke, Mass., until 12 o'clock, noon, Monday, May 15, 1911, for the construction of a concrete dam across the Manhan Brook in Southampton, Mass.

Plans and specifications for the same may be seen at the office of the City Engineer, City Hall, Holyoke, Mass.

A certified check for $2,500.00 must accompany the bids.

The Water Commissioners reserve the right to reject any or all bids.

T. J. CARMODY, Chairman.
JESSE SHELDON, Secretary.
T. J. LYNCH, Treasurer.
Board of Water Commissioners.
T. J. MacCARTHY,
City Engineer.

LAYING WATER PIPE.

City of Pittsfield, Mass.

Sealed bids or proposals for laying water pipe in the Town of Lenox and the City of Pittsfield, Mass., addressed to the Clerk of the Board of Public Works and endorsed "Proposal for Laying Water Pipe; Section 1," will be received at the office of the Board of Public Works, City Hall, Pittsfield, Massachusetts, until two o'clock P. M., Monday, the fifteenth day of May, 1911. At the above place and time bids will be publicly opened and read.

Each bid must be accompanied by a certified check drawn upon a national bank or trust company established in Pittsfield, Boston or New York for one thousand dollars ($1,000). A bond in the sum of fifteen thousand dollars ($15,000) will be required for the faithful performance of the contract.

Pamphlets containing information for bidders, form of proposal, contract and specifications will be ready about May eighth, 1911, and will be mailed to contractors who apply to the Engineer of the Board of Public Works, or may be obtained at his office. The plans will be ready about the same day and may be seen at the same office.

The principal item of work is laying about 10,500 feet of eighteen-inch cast-iron pipe. The printed form must be used in making bids. The right is reserved to reject any or all bids or to accept any bid.

WM. H. SWIFT, Chairman, ARTHUR H. RICE, EDWARD A. JONES, DANIEL ENGLAND, Committee on Water Supply; A. B. FARNHAM, Engineer Board of Public Works.

STRENGTHENING BRIDGE SPANS.

New York, N. Y.

DEPARTMENT OF BRIDGES,
13 TO 21 PARK ROW,
BOROUGH OF MANHATTAN,
CITY OF NEW YORK.

Sealed bids or estimates will be received by the Commissioner of Bridges at the above office until 2 o'clock p. m., on Thursday, June 1, 1911, for the strengthening of the end spans of the Williamsburg Bridge, over the East River, between the Boroughs of Manhattan and Brooklyn.

The amount of security to guarantee the faithful performance of the work will be One Hundred and Fifty Thousand Dollars ($150,000).

Blank forms and specifications may be obtained at the office of the Department of Bridges.

For fuller information and general instructions to bidders see "City Record," published at 96 Reade Street, New York City.

KINGSLEY L. MARTIN,
Commissioner.

CATSKILL AQUEDUCT.

New York, N. Y.

Sealed bids will be received by the Board of Water Supply, at its offices, seventh floor, 165 Broadway, New York, until 11 A. M. on May 23, 1911, for Contract 90, for the completion of the Hudson siphon, a deep pressure tunnel in rock, 14 feet inside diameter, extending under the Hudson River about 1,100 feet below the water surface, with two shafts 3,022 feet apart on the opposite shores, between Storm King and Breakneck mountains, in the towns of Cornwall, Orange County, and Fishkill, Dutchess County, New York.

At the above place and time the bids will be publicly opened and read. Pamphlets containing information for bidders, and pamphlets of contract drawings can be obtained at the above address by depositing the sum of ten dollars ($10.) for each pamphlet. For further particulars, see Information for Bidders.

CHARLES STRAUSS, President;
CHARLES N. CHADWICK,
JOHN F. GALVIN,
Commissioners of the Board of Water Supply.
JOSEPH P. MORRISSEY, Secretary

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